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USSR Report

AGRICULTURE

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15 January 1984

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AGRICULTURE

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POST HARVEST CROP PROCESSING

FRUIT HARVESTING, STORAGE, TRANSPORT PROBLEMS IN MOLDAVIA

Moscow SEL'SKAYA ZHIZN' in Russian 3 Dec 83 pp 1-2

/Article by N. Marfin, Moldavian SSR: "Apple Merry-Go-Round"/

/Text/ The Food Program: Analyzing the annual results. The production of fruit in Moldavia has reached almost 1 million tons. The industrial orchards are growing in force and their productivity increasing. But large shortcomings which tend to lower the branch's efficiency still persist in connection with organizing the harvest work and in the transporting and storage of the fruit.

Whoever has traveled the Odessa-Kishinev route during the peak of the season, where at the 30 kilometer mark sections of the Pamyat' Il'ichu Industrial Orchard stretch out along both sides, has taken note of the brilliant colors displayed here by the Jonathan, Golden Delicious and Mantuanskoye apples. All of the layers of branches -- from the trunks to the tips -- are bending low with the weight of the fruit -- large, juicy and fragrant.

Over the past few years in Moldavia, in addition to the Slobodzeya Specialized Farm, large industrial orchards have been created on a cooperative basis in 17 more rayons. Hundreds of old orchards at kolkhozes and sovkhoses are being modernized. Industrial orchards to be used for the introduction of modern and productive fruit crop forms, systems for the use of chemical processes and irrigation and also intensive and super-intensive technologies aimed at obtaining high yields are rapidly reaching their planned capabilities.

"This is already the fourth year following their planting" stated the leader of the 2d Section of the Pamyat' Il'ichu Interkolkhoz Orchard A.A. Frantsuzhan, and the apple trees of medium and weak-growing stock are now beginning to produce fruit. Today our giant, in terms of cropping power on the whole, has passed the 200 quintal mark, our Golden Delicious tracts are producing 350 and winter bananas -- 400 quintals per hectare. We have learned how to obtain high yields. Importance is now being attached to learning how to truly harvest, preserve and sell everything that is being grown.

The chief of the section, an experienced master of intensive horticulture and a recipient of the Leninist Komsomol Prize, places special emphasis on the latter and with good reason. The harvesting of fruit involves very laborious

work. The expenses for carrying out this work constitute 60-70 percent of all expenses associated with the cultivation of fruit. Nor is everything going smoothly here. Not all of the desired results are being realized, although it can be stated directly that persistent work is being carried out at the Pamyat' Il'ichu Orchard in connection with improving the harvest production line and the mechanization of labor-intensive processes -- collection, commodity processing and transporting of the fruit.

Ten mechanized harvesting teams have been created this year in the second section. Each team consisting of 18-20 workers has at its disposal three tractors and four PT-3.5 container carriers. Two caterpillar tractors work in the inter-row spacings and subsequently as the trailers are filled with fruit they are moved out onto the inter-sectional roads, where wheeled tractors pick them up and deliver them to the departmental sorting and packaging site. From the site, the products proceed in two flow lines. The fruit that is sorted and packaged in crates is immediately loaded onto vehicles and shipped to cities throughout the republic or to a railroad station for shipping to the union fund. The other portion of the fruit is shipped directly in containers to a fruit storehouse, where commodity processing is carried out as the trade funds are sold. The extensive use of container equipment is making it possible to raise the labor productivity of the pickers by a factor of 1.5!

The local experts, in collaboration with scientists, have recommended the use of still another efficient harvesting method: using a single-axle TAPZ-755 trailer, they installed a harvesting platform. The coupling together of from five to seven such units constitutes a "harvesting train." On the platform, which can turn freely about its own axis, there are two containers and four pickers who collect the fruit simultaneously from two rows. A brigade of 28 persons, which services a harvesting train consisting of seven wagons, can harvest 40-45 tons during a shift. The advantage of such trains lies in the fact that they eliminate the need for placing empty containers in the inter-row spacings. And this accelerates the harvesting process.

The workers attached to the inter-kolkhoz orchard fulfilled their plan earlier than previously -- during the middle of October: they harvested almost 58,000 tons of fruit -- a record figure -- since the beginning of the fruit-bearing period for the crop. An income of almost 8,000 rubles per hectare was obtained.

Nevertheless, the collective is unable to continue such results owing to losses caused by various problems and delays associated with the sorting, transporting, acceptance and shipping of the products. The leaders are beginning to believe that they lack sufficient fingers for counting all of the delays and obstructions associated with the harvest production line: during the season's peak period there was a shortage of No. 3 crates required for packing the fruit, the required number of railroad freight cars were not delivered to the ramp and vehicles lay idle for many hours waiting for the fruit to be accepted at the gates to the 1 Maya, imeni Tkachenko and children's nourishment plants and also at Solbodzeya Station. The quality of the products declined and losses increased.

Such was the situation tolerated at a leading specialized farm, not to mention other younger orchards which have only commenced their history. During the

season's peak I visited the Drokiya, Ryshkany and other inter-kolkhoz orchards. And at each one the discussion centered around the shortage of packaging materials. Even during September and October, urgent signals were received from Brichanskiy, Sorokskiy and Novoanenskiy Rayons: "Thousands of tons of apples are accumulating in the orchards and there is nothing to load them into."

Here is some official data supplied by the republic's TsSU /Central Statistical Administration/. The entire annual plan for procurements requires 27 million No. 2 and No. 3 crates. At the beginning of the year 16 million remained. Another 16 million were supplied over the course of three quarters, including 8.5 million in sets. It turned out that the requirement was even exceeded. Then why was it that signals were received indicating that thousands and thousands of tons of fruit were unpacked and subject to spoilage? The chief reason had to do with a lack of organization on the part of the departmental, association and farm leaders themselves. They either were incapable of dealing with the packaging resources or they simply did not desire to.

In October there was a great commotion within Minplodoovoshchkhov /Ministry of the Fruit and Vegetable Industry/ concerning signals of alarm received from the Prut Sovkhoz in Ungenskiy Rayon, the orchard of which contained up to 3,000 tons of apples that were awaiting shipment. An urgent requirement existed for sending out packaging materials from Ungeny. Yet an inspection revealed that such packaging material -- prepared but not assembled -- was available at the APO /agroindustrial association/ of Minplodoovoshchkhov!

The republic's Council of Ministers established the following system: no less than 40 percent of the crate materials must be assembled at the sites by the farms themselves. But how is it actually being handled? The horticultural farms of the republic's Minsel'khov /Ministry of Agriculture/ fulfilled their plans for assembling the crates by only 5 percent.

Yes and there was a great amount of confusion surrounding the crates. Generally speaking, is it correct to continue to rely upon the use of such packaging materials when more progressive forms for packaging and transporting the products are available and particularly when Moldavian was one of the pioneers in introducing these forms into operational practice? Here we have in mind the use of containers. It has already been mentioned that the Slobodzeya horticulturists have rejected the use of crates when harvesting their fruit. Today they are transporting their fruit in containers to the union fund. Towards this end the Slobodzeyskiy RAPO /Rayon Agricultural Association/ Council displayed concern for building special ramps at a nearby railroad station for use during the season. Valuable experience has also been accumulated in this regard in this same Ungenskiy Rayon. Here the Pogranichnik Sovkhoz last year began shipping apples to Leningrad by rail in containers.

Containers which can be used over and over again provide many advantages. They make it possible to mechanize the labor-intensive processes completely, they eliminate manual labor during transport operations, they increase the freight handling capability of machines and freight cars by 15-20 percent and they produce a considerable economy in the use of lumber. And a most important consideration -- compared to transporting in crates, the transporting of fruit in containers results in less damage to the fruit. Notwithstanding such

obvious advantages, sufficient use is still not being made of containers. The production of containers is not yet properly organized. For example, last year the republic's Goskomsel'khoztekhnika fulfilled its plan for container deliveries by only 22 percent.

Only small quantities of containers are being delivered and quite often to those who do not require them. This is slowing down the mechanization of harvesting-transport operations. Mention should be made of the VUK-3 multiple-purpose unit. This machine is capable of loading fruit into containers, tamping the fruit down, moving the containers from the inter-row spacings and transporting and unloading them at their destination, for example at a sorting and packaging line or in a fruit storehouse. This year I saw dozens of inactive VUK's in orchards -- they were lying idle only because the farms lacked the appropriate containers for moving along the roller tracks of the VUK units.

I have before me a yellowed booklet entitled "Technology for the Harvesting, Transporting and Storage of Fruit," produced by a local publishing house in 1976. Even the information was furnished in this booklet on the PSM-55 self-propelled fruit harvesting machine. It was pointed out that this machine, equipped with two recovery sections and a shaking unit suspended on the tractor, raises productivity compared to manual labor in the harvesting of apples by a factor of six and in the harvesting of plums -- by a factor of 6.6.

"How many such machines have been produced during one and a half five-year plans?"

The leaders of the association shrugged their shoulders:

"In all, only a few. They are not being ordered..."

And the machine builders themselves admit that they are not being ordered for one simple reason -- the combines were developed for older orchards. Such units are not suitable for use in the new and intensive orchards containing a more dense arrangement of fruit trees.

The Food Program calls for a considerable increase in fruit production in Moldavia. Even during the last five-year plan, special solutions were handed down concerning the technical re-equipping and an increase in the production capabilities of the Kishinev Plant for the Production of Agricultural Machines Used in the Growing of Fruit. It was stipulated that during the 1980-1982 period two new experimental-production complexes would be placed in operation specifically for the production of modern industrial series of machines for use in horticulture. The time passed and work has yet to be completed in any one department. USSR Minstroy /Ministry of Construction/, despite these important decisions, appears to be in no haste to commence this new construction and is cutting back its financing.

If the mountain cannot go to Mohammed, then... Thus reads the well known saying -- the horticultural experts must themselves display creative initiative. In collaboration with the designers and machine builders, they must strive to accelerate the development of a complex of machines for industrializing the production of fruit and berry products. A large base is

being created in Nisporenskiy Rayon for the production of prunes -- formerly a well known Moldavian delicacy. The rayon party committee and the RAPO Council extended an invitation to specialists attached to the Plodsel'khoz mash Scientific-Production Association and together they developed a program for the technical re-equipping of the new branch and they concluded a contract for collaborating in the testing of experimental models of the VUM-15 fruit-harvesting machine and the KPU-2 twin-unit combine (modernized PSM-55 combine), adapted for the picking of fruit in local plum orchards of the intensive type. This season these machines were operated at the kolkhozes imeni Lenin, imeni S. Lazo and imeni Pushkin. Compared to earlier models, the new models displayed greater productivity and a higher degree of operational reliability. But the machine operators made a number of valuable comments. The designers are taking into account their wishes and implementing improvements at the present time in some of the units. Estimates indicate that the horticulturists in Nisporenskiy Rayon, once their industrial tract of 4,200 hectares is in fruit-bearing status, will be able to utilize the new improved combines and thus release more than 3,000 workers from having to carry out the harvest operations and they will also realize a savings on the order of 1 million rubles.

In this manner, USSR Minsel'khoz mash /Ministry of Tractor and Agricultural Machine Building/, the scientific-production associations and the republic's RAPO would actively join in the practical work associated with the industrialization of fruit production.

Beyond any doubt, the problem of preserving and selling the crops continues to be a serious one in horticulture.

"Product losses commence at the very beginning of the harvest campaign" stated the chairman of the Ryshkany Inter-Kolkhoz Orchard I.F. Chimiris, a pioneer in intensive fruit production, "And this is occurring owing to the fact that we do not have a true storage base at our disposal. A new orchard has already been producing for several years and only now, in the middle of the season, have we been provided with our first warehouse facilities and without refrigeration equipment. Two dozen of the republic's large industrial orchards, each of which has 2,000-4,000 hectares of plantings, have only three standard coolers: this is the Pamyat' Il'ichu for 11,800 tons, Rybnitskiy and Prut -- each for 6,000 tons. But here is the paradox -- more than one half of them are operated not by the owners themselves but rather by various trade organization-lessees, which clip coupons at the expense of the horticulturist-producers.

Here are the facts. At the Pamyat' Il'ichu Industrial Orchard, the Tiraspol Procurement-Marketing Association of Minplodoovoshchkhov /Ministry of the Fruit and Vegetable Industry/ for the MSSR, early in the autumn, purchased 6,500 tons of winter varieties of apples at the price prevailing at the time. And immediately they were placed in storage in coolers leased from this same industrial orchard. The latter, in striving to fulfill its plan, went along with this plan and realized 1.4 million rubles worth of visible profit. And if the orchard had sold these products during the winter it would have realized a profit on the order of not less than 4 million rubles. The same situation occurred at the Prut, where the Kishinev and Ungeny fruit and vegetable trades leased refrigerators for 5,000 tons and caused several million

rubles worth of damage to the farm. Is the time not at hand for putting an end to such operations? Indeed, as a result of losing legitimate profit, the industrial orchards are unable to expand their production operations in an active manner, create a modern base for the storage and processing of products or to carry out social-domestic construction.

Minplodoovoshchkhov, the republic's Kolkhoz Council and its specialized Plodprom association for intensive horticulture have neglected the establishment of an industrial base. The builders working at the Brichany Orchard, from where more reports were received this year concerning shipment delays and fruit losses, over a period of 9 months fulfilled their plan for installing fruit storehouses by only 15 percent. The Oknitska Kolkhozstroy, after commencing the construction of an industrial base 4 years ago, mastered approximately only one half of the volume of construction-installation work. The situation was almost the same for each orchard.

Only this year a long-term plan took shape within the Kolkhoz Council for the construction of an industrial base and fruit storehouses. In accordance with this plan, the first two refrigerators will be installed in new intensive orchards in 1986 alone. And why was no attempt made to build simultaneously storehouses of the light type, which were employed by the peasants in olden times?

This year the Moldavian horticulturists achieved a high goal -- they produced 1 million tons of fruit. By the end of the five-year plan, fruit production will have increased noticeably. Intensive horticulture will develop more rapidly as an acceleration takes place in the elimination of existing and serious flaws in the fruit production line.

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POST HARVEST CROP PROCESSING

PROBLEMS WITH SUGAR BEET PROCESSING PLANTS IN UKRAINE

Sugar Refinery Silts Stream, Floods Fields

Kiev SIL'S'KI VISTI in Ukrainian 5 Oct 83 p 2

[Article, published under the heading "Rejoinder," by A. Shatylo: "Lost Treasures"]

[Text] A treasure was once found in Martynovka, Kanevskiy Rayon, Cherkassy Oblast -- 55 silver and gilt works of art by old masters. They are presently housed in a Kiev museum. There is also an article entry about this in the Ukrainian Soviet Encyclopedia, entitled "Martynovka Treasure."

But there are other valuable lost treasures here about which not everybody knows. It is true that there is a good deal of discussion about them. People talk about the matter with pain and anger, regret and shame. Only the management at the Martynovka Sugar Refining Plant are calm. They are not concerned by the fact that every year 58 hectares of fertile soil, farmstead-attached land, are flooded and produce no harvest. Nor are they bothered by the fact that the Kolkhoz imeni Petrovskiy and the Kolkhoz imeni Kirov lost 168 hectares of excellent haymeadow acreage. They are also indifferent to the fact that the Martynka River is dying. Distressed readers have written letters to the editor about this.

The story began about 25 years ago. The sugar plant continuously utilized water from a pond. The pond was continuously replenished by the Martynka River. Subsequently the water supply became inadequate. The sugar plant people were concerned. What could be done? Some suggested removing silt from the pond. Others suggested building a higher dam. They decided on the latter.

They built up the dam height over the years. The water level rose. The pond, however, and subsequently the river as well began silting up considerably with sugar refining waste. The water gradually flooded kolkhoz haymeadow acreage, turning it into a swamp. Once again the plant was threatened with shutdown. The sugar plant people grew concerned. They let out a contract for a plan to clean the pond.

The ready plan was submitted in 1973. A new problem arose: where could they put the silt? They spent almost 6 years "searching" for a site. The Kolkhoz imeni Kirov

designated 50 hectares of plant-inundated haymeadow acreage under the condition that the sugar plant people would reclaim the land. The then plant manager M. I. Shvaykovs'kyy made a solemn promise to honor these terms.

A dredge arrived, dredged tens of thousands of cubic meters of silt from the pond and pumped it onto the kolkhoz meadows. And that was the end of it. The plant management had no intention of building a protective embankment, reclaiming the lands, and cleaning the streambed. And water continued to flood the meadows, even advancing as far as the kolkhoz farmers' private plots.

Management changed at the plant. M. F. Orlenko was appointed general manager. people thought that the alarming situation would be changed, but there was no change. The new general manager continued the negligence and mismanagement of his predecessor. M. F. Orlenko paid no attention whatsoever to demands by the rayon organization of the Ukrainian Nature Conservation Society, the rayon public health station, the rayon land conservation and utilization inspectorate, and the Cherkassy Sakharprom Trust to lower the water level in the pond, to build a protective embankment, and to reclaim the kolkhoz lands. He and his chief engineer, L. I. Chuyenko, are failing to implement the decision of the oblast executive committee calling for constructing a recycling water supply system. Neither fines, nor toiler complaints, nor criticism in the urban rayon newspaper DNIPROVA ZIRKA are having any effect. One commission after another visits Martynovka, seeks to prevail upon M. F. Orlenko, but everything remains as before. The area of inundated acreage is growing, and the river is becoming more silted up. Another letter from readers to SIL'S'KI VISTI and an article in the newspaper DNIPROVA ZIRKA attest to this fact.

How long can this situation be tolerated? When will an end be put to the negligence, mismanagement and violations of state discipline on the part of sugar refinery general manager M. F. Orlenko and chief engineer L. I. Chuyenko? Let us hope that the UkSSR Ministry of the Food Processing Industry and the Cherkassy Oblast Executive Committee will respond firmly and as the law requires against the actions of these negligent plant executives and destroyers of nature.

Ministry Responds to Silting, Flooding

Kiev SIL'S'KI VISTI in Ukrainian 18 Sep 83 p 2

[Reply to SIL'S'KI VISTI article by UkSSR Ministry of Food Processing Industry and Cherkassy Oblast Executive Committee: "'Lost Treasures'"]

[Text] SIL'S'KI VISTI (No 178) published a critical article entitled "Lost Treasures." The article reported that the Martynovka Sugar Refining Plant is silting up with production waste a pond and the Martynka River and raised the question of the necessity of protecting against flooding kolkhoz haymeadows and kolkhoz farmer private plots in certain villages in Kanevskiy Rayon, Cherkassy Oblast.

UkSSR Deputy Minister of Food Processing Industry A. Rakhans'kyy and first deputy chairman of the Cherkassy Oblast Executive Committee M. Ivlev have informed us that the newspaper article has been examined. A commission, made up of representatives of the UkSSR Ministry of Land Reclamation and Water

Resources, oblast water management officials and the Kanevskiy Rayon executive committee, instructed oblast water management officials to assign the Cherkassy branch of the Ukrdneprovodkhoz Institute the task of preparing by 1 July 1984 draft documentation on facilities for regulating the water level on the Martynka River and protecting land and haymeadows from inundation in the villages of Berkozovka, Tagancha, and Martynovka. It has been proposed that the Cherkassy Oblast water management agency commence construction of these facilities in 1985. The Martynovka Sugar Plant has reduced the water level in its pond by half a meter. Other measures have also been taken to improve water management. In particular, a recycling-type water utilization system has been installed at the sugar refinery in order to reduce consumption of clean water. It is planned to build in 1984 a water recycling system providing water meeting industrial water standards, which will make it possible to utilize recycled water in the production process. The UkSSR Ministry of the Food Processing Industry has established oversight over execution of the targeted projects.

Illogical Policy Delays Sugar Beet Hauling

Kiev SIL'S'KI VISTI in Ukrainian 19 Oct 83 p 1

[Article by SIL'S'KI VISTI correspondent L. Kosychenko: "Four Hours in Line With Beets"]

[Text] Machinery Standing Idle at the Beet Delivery Station at the Chupakhovka Sugar Plant. Question Put to General Manager A. M. Antonov: When Will the Beet Receiving Operation Be Brought to Normal?

The farms in Zenkovskiy Rayon, Poltava Oblast, grew a fine sugar beet harvest this year. The average yield per hectare is 300 quintals. The machinery operators are doing a fast job of harvesting the crop. The smooth precision of the harvesting process, however, is unfortunately being hindered by the people at the Chupakhovka Sugar Refining Plant, located in Akhtyrskiy Rayon, Sumy Oblast.

A beet delivery station has been operating for many years in the vicinity of Zenkov in order to make it more convenient for the farms of Zenkovskiy Rayon to dispose of their beets. The receiving station's handling capacity is, quite frankly, behind the times, and was never designed to handle the size of this fall's crop. Taking precisely this into consideration, as well as the rapid pace of the harvest, a great many trucks from the Zenkovskiy Rayon Sel'khoztekhnika have been sent out to the rayon's sugar beet fields. A team of drivers of heavy KamAZ trucks from the principal motor transport enterprise of the oblast Poltavatransel'khoztekhnika Association, headed by shock worker of Communist labor V. A. Voron'ko, has also come to help out the harvest.

"But we are even unable to meet performance standards here," the driver team leader explained angrily. "Our trucks are in good working order and are specially equipped for hauling beets. The KamAZ is capable of hauling a load of 16 tons. Our drivers are well disciplined. But we spend more time standing and waiting at the beet delivery station than we spend hauling the crop."

There is bitter truth in this driver's words. Judge for yourself. The distance from the beet fields of the Ukrayina Kolkhoz, where KamAZ trucks are loaded, is 15 kilometers to the delivery station, which figures as 20 minutes travel time. Trucks wait from 2 to 4 hours, however, at the delivery station, waiting their turn to be unloaded!

Beet delivery station manager M. I. Trykoz agrees that two BUM unloading units are not enough to handle more than 40 heavy trucks efficiently and without delays. And unfortunately, other than acknowledging the lamentable facts, the manager is doing nothing to improve the situation. Obviously one cannot immediately purchase and install a new, additional BUM. But under the circumstances it would at least be possible to extend the work shift of the BUM operators. They could start operations somewhat earlier each morning.

Truck driver O.S. Tereshchenko took on a load in the kolkhoz fields early in the morning. By 8:30 he was standing at the delivery station scales at Zenkov. But all his promptness and alacrity were in vain. The BUM operators do not start their work shift before 9 a.m.

The long lines for unloading and the wasting of several hours of precious time on each run are evoking deserved displeasure on the part of the truck drivers, who are unaccustomed to such poor management. In order to improve the situation, they suggested hauling beets from the fields directly to the refinery at Chupakhovka. The distance from the beet fields of the Ukrayina Kolkhoz to the plant is 25 kilometers -- not much more than the distance to the beet delivery station. In addition, there are no lines at the plant unloading areas, with each truck driver spending only a few minutes on the unloading operation. An obvious savings. And the most important thing is that this would make things easier for the beet growers, whose harvesting operations are being impeded by the mountains of beets which have been dug up but not hauled away.

Under the circumstances the position taken by the general manager of the Chupakhovka Sugar Refining Plant, A. M. Antonov, seems surprising. He categorically refused to receive and unload at the enterprise's delivery areas beets hauled by trucks directly from farms in Poltava Oblast.

"Such instructions are incomprehensible," argue the drivers. "It costs money to haul beets from the field to the delivery station and store them in pits, and money is spent, a month or two later, loading beets onto narrow-gauge railcars, and hauling them to the plant for processing. Who needs these double expenditures?"

"This is none of your business," obdurately replies A. M. Antonov. "I am the general manager here, and this is the way we are going to do things."

M. S. Murat, chairman of the Kolkhoz imeni Kuybyshev in Zenkovskiy Rayon, cogently argues the flawed nature of such a position: "Kolkhoz trucks travel to the refinery in Chupakhovka to pick up loads of bagasse. Why should we make empty runs? Let us at least in such instances load them with sugar beets."

The people at the plant respond unmoved to all the logical arguments of the farm managers: no truck carrying Poltava beets can be unloaded at the plant. And they add that this is the firm position taken by plant general manager Antonov.

In our opinion, under the circumstances we are dealing here not with a firm position taken by a thoughtful plant manager but rather common arrogance. No other measuring stick is applicable to such a "position." Even if one approaches this situation purely from the narrow parochial interests of the sugar refinery, general manager Antonov's "position" cannot hold up to any criticism. The fines which the plant must pay for several hours of truck idle time, idle time due to the fault of the plant manager, already exceed by severalfold the cost of hauling the beets. Here are some figures for comparison. One ton of load hauled a distance of 16 kilometers costs 1 ruble 4 kopecks. One minute of forced KamAZ truck standing time costs the plant a fine of 15 kopecks. If a KamAZ truck has stood waiting 4 hours in line for a BUM unloading unit, the plant must pay 36 rubles. And if dozens of trucks are standing in line waiting....

All these calculations should really be made by the people in the appropriate oversight agencies, including public oversight inspectors, who are invested with considerable authority. And it would also be fair and just for sugar refining plant general manager A. M. Antonov to pay the fines from his own pocket rather than from the plant's funds.

Reply to Beet Hauling Article

Kiev SIL'S'KI VISTI in Ukrainian 10 Nov 83 p 2

[Response to SIL'S'KI VISTI article by Ukrainian Agrarian-Industrial Association of the Sugar Industry: "'Four Hours In Line With Beets'"]

[Text] Ukrsakharprom of the UkSSR Ministry of the Food Processing Industry has looked into the critical article published under the above title (SIL'S'KI VISTI, No 239). Association chief O. Zayets acknowledges that trucks had indeed been standing idle at the Chupakhovka Sugar Refining Plant's beet delivery station due to the fact that officials of the Sumy Production-Agrarian Association and the Chupakhovka Sugar Refining Plant had failed to take necessary measures to ensure an efficient distribution of raw beets among delivery stations, in order to guarantee undelayed unloading of beets.

By order of Ukrsakharprom, Comrade A. M. Antonov, general manager of the Chupakhovka Sugar Refining Plant, was issued a reprimand for his mistakes. The same order instructs Comrade A. V. Lyubchak, general manager of the Sumy Production-Agrarian Association of the Sugar Industry, to determine financial loss caused by truck idle time at the delivery station effective 1 October of this year and to recover this cost from Comrade A. M. Antonov, general manager of the Chupakhovka plant.

3024

CSO: 1811/15

LIVESTOCK FEED PROCUREMENT

BELORUSSIAN ROUNDTABLE DISCUSSION ON FEED PROTEIN PROBLEM

Minsk SEL'SKAYA GAZETA in Russian 3 Dec 83 p 2

/Article on roundtable discussion prepared by A. Til'kov: "Sufficient Protein for the Farms"/

/Text/ Animal husbandry is a leading branch of agriculture in our republic. Its workers are striving to cope successfully with the tasks advanced in the Food Program and from year to year they are increasing their production of milk, meat and other farm products. But this requires intensive development of the feed base, maximum improvements in its structure and balanced rations for the animals in terms of all of the nutrients and especially protein.

The problem of protein is a serious one and one requiring the use of a complete and comprehensive approach. The successful solving of this problem is dependent both upon the farms themselves and also upon the ministries, departments, scientific-research institutes and enterprises of the mixed feed and microbiological industry involved in this important work. Here we have a broad field of activity for creative research and the specific use of the latest achievements of science and leading practice and progressive technologies. These were the subjects of a roundtable discussion conducted by the Editorial Board of SEL'SKAYA GAZETA.

The following individuals participated in the roundtable discussion:
A.P. Dekhtyar -- chief of the Department for the Administration of Feed, Meadows and Pastures of the MSKh /Ministry of Agriculture/ for the BSSR;
V.P. Samsonov -- director of the Belorussian Scientific Research Institute of Farming; K.I. Lapkovskiy -- director of the Lyubanskaya Experimental Base in Lyubanskiy Rayon; I.K. Slesarev -- head of the Physiology and Animal Nourishment Laboratory at the Belorussian Scientific Research Institute of Animal Husbandry and Doctor of Biological Sciences; G.P. Tolkach -- chief agronomist at the Selyuty Sovkhoz in Vetebkiy Rayon, P.M. Minyuk, director of the Brest Oblast Agricultural Experimental Station; Ye.V. Masharskiy -- chief agronomist at the Znamya Lenina Kolkhoz in Korelichkiy Rayon; O.G. Davydenko --

scientific assistant at the Institute of Genetics and Cytology of the Academy of Sciences for the BSSR and Candidate of Biological Sciences; M.A. Kudinov -- head of the Department for the Mobilization of Plant Resources of the Central Botanical Gardens of the BSSR Academy of Sciences and Doctor of Biological Sciences; L.N. Bordachenko -- deputy chief of the Main Administration of the Mixed Feed Industry of the BSSR Ministry of Procurements; V.G. Tkachuk -- deputy chief of the republic's production laboratory for the mixed feed industry; M.V. Zalashko -- head of a laboratory at the Institute of Microbiology of the BSSR Academy of Sciences and Doctor of Biological Sciences.

Herewith is furnished an exchange of opinions among those who participated in the meeting and their specific recommendations concerning efficient and urgent means for increasing the production of feed protein.

Field and Meadow Reserves

A.P. Dekhtyar: Animal husbandry in our republic is constantly encountering this problem -- a shortage of protein in the rations. Moreover, the deficit in this most important nutrient is increasing as the number of livestock increases. To be more specific, each year there is a shortage of roughly 350,000-400,000 tons. Thus the shortfall in output is great, as is also the consumption of feed owing to a lack of balance in the rations.

The principal means for solving the protein problem are pointed out in the republic's comprehensive program for developing feed production during the 1981-1985 period. The essence of this program -- consistently improving the structure of the feed sowings and raising the cropping power of pulse crops. A noticeable expansion is taking place in the areas being sown in crops that are rich in protein. Considerable reliance is being placed upon clover, peas, vetch, maple peas and other crops. Just as in the past, lupine, which possesses high feed properties, continues to be indispensable for use of low fertility soils.

One of the chief trends in the comprehensive program for feed production -- the intensification of grass cultivation. Although certain quality improvements have been achieved, they nevertheless are not sufficient for satisfying our requirements. Let us take perennial grasses. They are being grown on more than 1.3 million hectares, with very little fodder being obtained -- 150-170 quintals from each hectare. Only this year was this indicator higher -- 180 quintals. The structure of the grasses has still not been improved. The proportion of clover in it is not adequate. At the same time, more than one half million hectares of perennial grasses are represented by cereal grasses in pure form. Strong measures are required in order to correct this situation. Clover should be found on up to 80 or more percent of the mown grass areas. Moreover, consideration must be given to the fact that it accumulates humus in the soil with no additional expenditures involved.

Each kolkhoz and sovkhos is capable of creating a reliable base for augmenting its protein resources. Such opportunities are especially favorable at the present time. This year a record harvest of clover seed has been obtained -- more than 13,000 tons. It bears mentioning that only 15,000 tons were harvested throughout the republic during the entire 10th Five-Year Plan. In

short, a fine foundation has been established and at the present time it is fully possible to raise the proportion of clover to 80 percent of the mown area of grasses. Moreover, this is necessary.

Annual grasses are being employed extensively throughout the republic for procuring feed for the winter. As much as possible, these grasses should be represented by pulse crops in pure form or in a mixture with cereal grasses. Intermediate sowings must be employed out on the fields in a more persistent manner: winter, undersowings, post-cutting and after-harvest sowings. The task consists of raising their proportion next year to not less than 9-10 percent of the arable land. In addition to supplementing the forage supply and the protein resources, they also serve to extend the green production line operation until late autumn.

A great amount of work remains to be carried out in connection with improving the natural haying and pasture lands. A situation wherein the feed yield obtained from these lands amounts to just slightly more than one fourth of the overall procurements cannot be considered normal. The Ministry of Agriculture is undertaking measures aimed at changing this situation. In particular, greater quantities of fertilizer are being allocated for the improved haying and pasture lands and work is being carried out in connection with sowing and resowing them with grasses and ensuring systematic use of these lands.

Finally, let us pose the question directly. Is it possible to reduce the protein deficit in the rations of animals? Analysis reveals that it is possible. A requirement exists for merely sealing off the protein losses which occur both when harvesting the forage crops and also during their storage periods. Specialists have estimated that at times up to 20 or more percent of the valuable nutrients are lost owing to violations of the technological requirements for procuring and preserving the crops on the farms. One fifth of the protein in the feed is lost! This constitutes a great economic loss. This subject warrants serious discussion, the causes should be uncovered in a decisive manner, the personnel should be taught thrift and zealous and scientifically sound management. Moreover, fine allies in carrying out this work are the brigade contract and improved forms for labor organization and wages. Yes and the technical equipping of the kolkhozes and sovkhoses with feed harvesting machines has increased noticeably following the May (1982) Plenum of the CPSU Central Committee. This year almost one half of the republic's farms received new feed harvesting complexes.

Thus today a great deal depends upon the correct selection of crops for the purpose of forming the harvest and also upon a correct determination of the haying periods and the work organization.

All efforts must be directed towards reducing the losses in feed protein. This includes more extensive use of artificial drying of mown grasses and the preparation of grass meal. Although the mentioned technological processes are costly, it would appear that no other solution is as yet available. Consideration must also be given to the fact that it is very difficult to obtain hay from leguminous grasses in the absence of forced ventilation. The use of preservatives, as proven by the scientists, will serve to reduce protein losses. New and more effective preparations are under development in the

republic at the present time. Importance is being attached to ensuring that they are employed in a practical manner and rapidly as possible.

There are still many problems associated with the production of feed hydrolytic yeasts and dried pulp residue. These problems can be solved through close interaction between workers attached to the various branches of the agro-industrial complex and the scientists. It is necessary for each service and each department involved in the production of protein additives to be imbued with a high sense of responsibility, without which it will be impossible to achieve success.

Simple Arithmetic

K.I. Lapkovskiy: Our farm is located in the forest district and consists of peat bogs. This means that it has its own peculiarities with regard to feed production. Many years of experience have shown that a hectare of peat can feed animals abundantly and furnish feed containing fine dosages of protein. And this is particularly true if there is an adequately sound feed crop structure and if a leading technology for the procurement and storage of forage has been introduced into operations.

To be more specific -- feed production at the farm has been singled out as an independent branch which is managed by experienced specialists, staffed by permanent skilled machine operators and supplied with powerful items of equipment. A basic feature of the branch's operations is the brigade contract principle, with the coefficient of labor participation by the personnel being taken into account. It must be emphasized that the conversion over to the new form for organizing feed production is producing more perceptible results. We are satisfying fully the livestock feed requirements using internally produced feed, we are increasing the productivity of the farms, we are able to increase our milking herd and the number of animals undergoing fattening for beef purposes and we are expanding our swine raising operations. The animal density is high. There are more than 5,000 hogs alone.

Feed is available for animal husbandry during both the summer and winter. And it comes as no surprise to learn that we are obtaining up to 76 quintals of feed units from a hectare of land.

We have our own approach with regard to the use of peat bogs -- one half of them are occupied by perennial grasses. Notwithstanding the character of our soils, a worthy place is occupied by pulse crops and particularly alsike clover. We sow it in a mixture with timothy for hay and in pure form, for adding as a supplement during the ensiling of potatoes for hogs. Such a combination of grasses, with a predominance of protein grasses in the mixtures, serves to solve the protein problem. For example, ensiled potatoes in a mixture with clover makes it possible to reduce the amount of grain contained in hog rations.

The use of reedgrass on peat bogs has turned out to be very advantageous. It is grown on 800 hectares. This crop is distinguished by early aftergrowth in the fodder. A powerful department for the production of vitamin meal commences operations as early as the middle of May. Reedgrass furnishes 3-4 rich cuttings.

On the whole, we are producing during the course of a season not less than 3,000 tons of grass meal in granules. All of it is being supplied to the mixed feed industry in a high quality condition.

But are the supplies of protein adequate for our farms? Here an affirmative answer cannot be given. A protein deficit is being felt and this is resulting in an overexpenditure of forage per unit of product. Nor is this present wintering period an exception, despite the fact that in terms of physical volume a good amount of feed has been obtained and it is being stored in good facilities. There is another reason for the protein deficit and it warrants special mention. A nitrogen deficiency in cereal grain crops results in a shortfall in protein. This is quite simple arithmetic! Meanwhile, proper order has still not been established in connection with the supplying of nitrogen fertilizers. If nitrogen fertilizers are not applied to the peat bogs, an inevitable decline takes place in their productivity and a reduction in the quality of the bogs becomes apparent.

I can make this statement with a firm conviction. Based upon numerous studies and experiments, the farm's specialists have established the fact that if the peat bogs are not supplied with the required dosage of nitrogen the value of the cereal grain crops in terms of protein is extremely low. It would appear that the position to be taken by the planning organs and competent services of the agroindustrial complex is quite clear: the mineral fertilizer funds must not be distributed according to the old manner. Allow me to reinforce this statement with a fresh fact. This year, 210 kilograms of active mineral fertilizer agent were applied per hectare in behalf of the perennial grasses. This was not bad in terms of volume. But 60 percent of the fertilizer was potassium.

I would like to direct attention to a problem that is disturbing us practical workers. For example, our farm is furnishing high quality grass meal and receiving in return mixed feed having a low protein content. At the present time, under the winter conditions, such feed must be further enriched or issued to the livestock without enrichment, but expending a greater quantity in order to achieve the programmed output level. We are aware of the difficulties confronting the mixed feed industry and the protein deficit in the materials being placed at their disposal. However, this does not make it any easier for the farms. The protein problem must be solved in a more rapid manner using the fields and meadows and more active assistance must be provided by the microbiologists.

I.K. Slesarev: Kazimir Ivanovich Lapkovskiy is completely correct. It is my opinion that the distribution of mineral fertilizers must be reexamined and an optimum level found for supplying these fertilizers, with the soil characteristics being taken into account. Indeed, large amounts of potassium are still being supplied on some farms for no special reason. More nitrogen should be applied in behalf of cereal forage crops, since this will increase the protein content. But in the process all hope should not rest with our chemical industry. Everyone is aware of how the nitrogen contained in organic materials, especially in liquid farmyard manure, is used in a wasteful manner. Quite often, in the case of some farms, this valuable fertilizer runs off into the rivers and lakes rather than onto the feed lands.

Our feed storage losses are high. Haylage or silage is placed in a trench or tower and upon removal it turns out that 40-50 percent of the forage has spoiled. Large quantities of hay placed in ricks and stacks are poorly completed. They are subjected to snow and rainfall. Simple sheds are needed on each farm. Sheds such as those found for example at the Vedrich Sovkhoz in Rechitskiy Rayon, where the storage losses are quite negligible.

One reserve for increasing the protein amounts -- the waste products of the sugar industry and particularly pulp residue. But how is it being stored? Quite often in a wasteful manner and outdoors where in the winter it freezes and at times is delivered to the farms in the form of frozen lumps. The time is at hand for solving the technological problem -- organizing the squeezing of the pulp residue. According to our data, the very useful microbe protein predominates in this feed. The same can be said regarding whey and the waste products of meat combines. Portions of these types of feed are still ending up in the sewerage lines. More attention should be given to the problem of enriching the waste products in the interest of alleviating the shortages in them of a number of nutrients. All told, this will make it possible to lower noticeably the consumption of feed for output purposes. The present expenditure of 1.3-1.4 feed units per kilogram of milk is an abnormal phenomenon. If all of the unused opportunities are thoroughly taken into account, then it will become apparent that the republic's protein problem is fully capable of being solved.

Responsibility of Scientists

P.M. Minyuk -- I would like to direct the attention of those participating in this roundtable meeting to the sharp reduction that has taken place in the productivity of lupine. And indeed this crop is one of the most valuable sources of protein. Why has its productivity declined? Because lupine is being sown in an unsystematic manner. In a number of instances it was sown on recently limed fields and this brought about a negative reaction in the crop.

It seems to be that our responsibility as scientists lies in developing clear recommendations for the cultivation of lupine and recommending more acceptable varieties for the republic's zones. The Akademicheskiy-1 variety, which has proved its worth, should be employed in a more bold manner. Many other varieties have been studied and are being studied. The Naro-chanskiy variety proved its worth very well on a large tract of the Oktyabr' Kolkhoz in Kamenetskiy Rayon. It is furnishing 24 quintals of grain per hectare as well as a large amount of fodder. The farm's specialists are skilfully controlling the sowing norms for the crop and they have included it in a crop rotation plan which will make it possible to alternate the sowings correctly. The scientists and plant breeders at the station consider their task to be that of publicizing in every possible way the Oktyabrya experiment in Brest Oblast and introducing it into operations on other farms.

We are exercising scientific control over the fertilization system for meadows; indeed these lands constitute a rich storehouse for protein. We are devoting special attention to the correct selection of crops in mixtures and to the scientifically sound use of fertilizers. Work should not be carried out on the meadows in a blind manner.

Allow me to say a few words concerning the cruciferae family of crops. They are of importance in any discussion concerning feed production. Cruciferae family crops represent a treasure of green feeds. If they are available in sufficient amounts, the period for providing the livestock with a green top dressing can be extended considerably. They are already being used for this purpose at the Zarya Kommunizma Kolkhoz in Ivanovskiy Rayon. At the same time, a savings is being realized in winter forage and milk and meat are being obtained at a cheaper cost.

I would also like to mention another valuable protein crop -- soybeans. I wish to state on the basis of experience that soybeans can be grown on the republic's fields. We are obtaining 18 quintals of soybean grain from the fields of our station. Soybeans are being cultivated very well under almost identical conditions on lands in Poland.

C.P. Samsonov -- The scientific-research institutes are addressing the protein problem in a serious and constant manner. It is very important. The forage being supplied to the livestock is still less than the established zootechnical norms. This circumstance is further aggravated by the fact that the feed is not balanced in terms of protein. We must supply cattle with protein through the use of clover, lupine and other pulse crops. Feeding for the milking herd, taking into account the need for supplying protein, must be examined from a more simple standpoint. In the GDR, for example, concentrates are issued to a cow if its productivity exceeds 16 liters of milk daily. There is rational sense to the use of such an approach.

The problem is somewhat more complicated if we are discussing a feeding program for hogs. However, the need for including clover fodder in the rations for hogs is obvious. Particularly in view of the fact that this makes it possible to reduce the consumption of grain for feed purposes.

Each year a large quantity of grass meal is prepared on the republic's farms, but only a very small amount of it is accepted by the mixed feed industry as being of 1st class quality. And the fact of the matter is that it is prepared for the most part from cereal grasses which quite often are overripe. More use should be made in the clover production line of granules made from clover -- this is an excellent feed.

Peas are presently being introduced into operations out on our fields on an increasing scale. Under present conditions, they are furnishing high yields. True, they contain less protein than do soybeans and lupine. A fine new variety has appeared -- the Soviet bred Aist variety. Scientists at the institute have developed a technology for cultivating peas for grain. A considerable amount of interest is being displayed in "bearded" peas. These varieties are suitable for combine harvesting in all types of weather. They also have another important characteristic -- they do not lodge. True, the cropping power of this type of pea is somewhat lower than that for other varieties, but with correct use of the accepted agricultural practices "bearded" peas can furnish 30 or more quintals of grain per hectare.

We are also interested in the so-called sandy clover, which is being employed extensively in the Lithuanian SSR at the present time. This crop is being

grown here on more than 5,000 hectares. Soils on which clover does not grow and on which lupine is severely damaged by fungus diseases are best occupied by a crop which is less demanding and yet characterized by high feed properties -- sainfoin. Such is the method being employed in Estonia. An accelerated program for employing this crop on several farms in our republic should be approved.

We scientists are often asked one particular question: what is the situation with regard to rape? Certainly, it is under cultivation. Our lands are capable of producing 20 or more quintals of seed per hectare for this crop. Rape provides oil and cake -- a valuable protein feed. Generally speaking, problems arise in connection with cruciferae family crops. For example, 90 kilograms of nitrogen must be applied in order to obtain 200 quintals of bulk per hectare. Indeed, this results in the accumulation of protein within a short period of time in the autumn. I have in mind the post-harvest sowing of rape. There is a shortage of nitrogen fertilizers. But a solution is available to a certain degree: liquid manure, a fine substitute for nitrogen fertilizers, must be applied in behalf of the rape.

O.G. Davydenko -- At our academic institute, work has commenced on the cultivation of soybeans under the conditions found in our republic. The initial steps have been taken and the results are reassuring. At Dovsk, in Rogachevskiy Rayon, soybeans are furnishing 20 quintals of seed per hectare. Unfortunately however, some economic leaders are displaying an extremely cool attitude towards this excellent protein crop. The scientists are conducting experiments but as yet they have not been provided with the necessary support. We are convinced that the soybeans can furnish higher yields. This is why a series of early-ripening varieties is being created at the present time, varieties which may respond better on Belorussian fields. At an experimental station in Dovsk, a soybean cultivation technology has been developed, the sowing norms have been defined and also those for applying herbicides and various cultivation methods for use in connection with this crop have been approved.

We scientists favor more extensive use of soybeans out on the fields and not just on experimental plots. Timidity can hold back the entire operation. The republic's southern oblasts must initiate this action. For example, the farmers in Gomel Oblast can take advantage of the rich experience accumulated in the cultivation of soybeans at the Chernigov and other Ukrainian kolkhozes and sovkhoses.

Both Today and in the Future

Ye.V. Masharskiy -- How are we solving the protein problem at our kolkhoz? It bears mentioning that our animal husbandry farms have an adequate supply of protein. Peas and vetch have become great sources for obtaining protein. In the grain crop structure, 205 hectares have been set aside for peas and vetch. This year peas have furnished 30.1 quintals of grain per hectare. We are growing it in a mixture with grain crops -- barley or oats. In all, we obtained 400 tons of pure pea grain at the kolkhoz. According to the most humble estimates, this represents 80 tons of protein.

Our kolkhoz specializes in the raising of non-calving young cows and before long it will further specialize in the raising of hogs. A hog complex for 12,000 head is under construction. The protein deficit at the farm will then be 90 tons. We are already devoting thought to how best to cover this deficit and a solution is in sight.

The kolkhoz engages in the production of grass seed. Thus there is no shortage of pulse crop seed. As a result, we are expanding our areas to be used for the cultivation of red, white and alsike clover and also peas and vetch. We have an efficient system for topping off the feed lands with fertilizers. Nitrogen and potassium fertilizers and also phosphorus fertilizers are being applied in dosages based upon cartogram readings. We are applying not less than 1 quintal of ammonium nitrate in behalf of the peas.

The participants in the "roundtable" discussion quite properly raised the question regarding preservation of the feed. At our kolkhoz there is a sufficiency of protein in the rations owing to the fact that all of the coarse feeds are issued to the livestock under sheds in the winter and only in prepared form. This necessarily requires that the rations be properly balanced in order to ensure the planned milk yields and weight increases.

G.P. Tolkach -- At the Znamya Lenina Kolkhoz in Korelichy, we are also engaged constantly and intensively in the cultivation of clovers. We grow alsike, white and red clover. We do not have cereal grasses in pure form. They are all sown in a mixture. This improves considerably the quality of the feed being obtained.

A large area at the sovkhos is occupied by cowparsnip -- a silage crop recommended for our use by workers at the Central Botanical Garden of the Academy of Sciences for the BSSR. It produces excellent yields -- 700-800 quintals of fodder per hectare. We procure one half of all of our silage from cowparsnip. True, it contains a large amount of water and yet this is compensated by a high sugar content. Cowparsnip makes it easier to balance the rations in terms of the sugar-protein ratio. But certainly we are unable to solve the protein problem through its use.

Here a greater preference is shown for the use of rosin-weed, a high protein crop (a kilogram contains up to 160 grams of protein). It grows very well in low areas. We prepare grass meal from rosin-weed. We obtain our own seed.

And milk vetch grows especially well on our lands. This pulse crop grows rapidly and produces fodder much earlier than clover or even rye. There is still only a small amount of it at the sovkhos -- approximately 2 hectares. In the spring we sow another 20 hectares using our own seed. Certainly, in the future we will actively introduce new crops, especially high protein ones.

Research and Lack of Coordination

M.A. Kudinov -- The republic's protein group of crops is not very great. Thus we are persistently searching for protein plants which can be borrowed from other regions and which can adapt to our conditions. We are presently working on a new type of clover, the homeland of which is the Caucasus. It is not

demanding with regard to soil fertility, it is not inferior to our clovers in terms of cropping power and it produces seed annually. We are testing the Caucasus clover mainly on light-textured soils.

Or let us take the milk vetch group of plants. Although they are of southern origin, they nevertheless are winter-hard; under our conditions, they develop strong root systems and they have many nodules on their roots. One of their virtues: they are not demanding with regard to nitrogen. On many tracts there is no requirement whatsoever for applying nitrogen fertilizers and their cropping power is very good -- 300 quintals of fodder per hectare. Milk vetch is a late ripening crop. During the first year it develops slowly: mainly the root system and not the above-ground bulk. An attempt was made to grow these crops in the Forest District. Unfortunately, the peculiarities associated with their development were not understood in Gantsevichskiy Rayon and experimental plots were plowed under. But at the Zhodino Experimental Base in Smolevichskiy Rayon, success was achieved in safeguarding an experimental plot occupied by milk vetch.

We have already accumulated positive experience in the cultivation of milk vetch. During the first year it lags behind in the accumulation of bulk, but subsequently it produces an excellent yield. Milk vetch is winter-hardy and it produces 3-4 cuttings per season. In October it is still green and can be employed successfully in the green production line. True, it requires more fertile soil for cultivation and good moisture.

In the case of lupine, we are testing north american varieties.

The search for new forage crops is continuing.

L.N. Bordachenko -- The mixed feed industry in our republic is still obtaining only 40-50 percent of the protein raw materials which it requires. Thus the protein problem continues to be a very critical one for us. Yes and the quality of the raw material leaves much to be desired. Only approximately 3 percent of the grass meal being received by our enterprises from kolkhozes and sovkhoses is of 1st class quality. This amount is quite miserly. In future years this will force us into deviating from the GOST /state standard/ requirements with regard to the preparation of mixed feed.

V.T. Tkachuk -- The feed laboratories must display a greater degree of responsibility if we are to obtain correct evaluations of the properties of feed meal. They are still conducting analyses mainly on the basis of carotene and moisture content. The remaining nutrients are not being determined by them. True, the problem is aggravated by the limited potential of the laboratories. Their logistical base must be strengthened in every possible way and the professional level of the workers raised.

L.N. Bordachenko -- This comment is absolutely correct. At the same time, I would like to mention still another problem that is of vital concern to us -- the production and deliveries to use of pulse crops. During the 1970's we were supplied with large amounts of lupine grain and now -- not one ton. Thus substitutes must be found and more meal must be produced from high protein crops. There is no need for proving the importance of such action. It is

sufficient merely to cite one example. Complete dosages of protein are contained in the mixed feed being produced for the Mir Sovkhoz-Combine. And the daily weight increases for cattle undergoing fattening regimes are never lower than 1,200 grams and they are higher by more than twofold than the weight increases being recorded on other farms in the republic. This is truly a reserve!

M.V. Zalaskho -- Microbiology is playing an exceptionally great role in the successful implementation of the Food Program. We are aware as to what must be done in order to strengthen the feed base for animal husbandry.

The collective at our institute is striving to find more effective variants for utilizing the waste products of the meat and dairy industry. And such developments are at hand. Approximately 400,000 tons of waste products remain at the republic's dairy plants each year. And as yet the return from them has been minimal. Only 20-25 percent of the whey, for example, is actually being assimilated by the animals. The institute's scientists have recommended that the whey be used for producing yeasts. More protein is concentrated in such yeasts and hogs, upon eating such feed, produce high weight increases.

Despite the obvious advantages to be realized, the production of such yeasts has still not been organized on a production line basis. The work is being held up by the Ministry of the Meat and Dairy Industry for the Belorussian SSR. It brushes aside in every possible way the technology which we recommended for the production of protein feeds. The arguments advanced have been very naive: we will release skim milk and whey for the farms and what else is necessary? This represents a clearly expressed specialized approach and a reluctance on the part of the ministry's specialists to burden themselves with additional problems.

Nor is support always forthcoming for other developments of the institute having to do with solving the protein problem. It is assumed that the discussion of this subject will arouse some serious thought: how to include in the work, in a more rapid manner, many unused reserves.

The exchange of opinions by those who participated in the roundtable discussion served to underscore the urgency of the protein problem. Many questions were raised which require urgent solutions. Critical comments were addressed against those who are not displaying flexibility or who are not making a sufficient contribution towards implementation of the Food Program. This then was the purpose of the "roundtable," which brought together representatives of the interested parties of the agroindustrial complex.

The third year of the five-year plan is coming to a close. It produced considerable successes, including some in feed production, as evidenced by advances realized in solving the protein problem in animal husbandry throughout the republic. The prerequisites have been created for carrying out this year's livestock wintering campaign in a better manner and for achieving a noticeable increase in farm output. But the

Food Program has dictated new and more responsible tasks for the future. Thought must be given to feed production in the future and to constantly augmenting the protein resources -- the foundation for increasing the productivity of the animals. This is why each kolkhoz and sovkhos must thoroughly analyze last year's feed procurement results, study their potential again and again, analyze the structure of the feed fields, isolate and eliminate from it the weak areas and make all preparations for the new season.

The Editorial Board hopes that the questions raised by the participants in the "roundtable" will be discussed on the pages of SEL'SKAYA GAZETA by the scientists and practical workers. They have something to say and they should share their experience and expose the shortcomings and mistakes made in feed production. All of this will be of great benefit.

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LIVESTOCK

TRANSCAUCASIAN REPUBLIC CONFERENCE CONSIDERS LIVESTOCK PROBLEMS

Baku BAKINSKIY RABOCHIY in Russian 23 Nov 83 pp 1,2

[Speeches by K.M. Bagirov, 1st secretary of the Central Committee of the Communist Party of Azerbaijan and V.K. Onisovets, deputy chief of the Agriculture and Food Industry Department of the CPSU Central Committee: "To Increase In Every Possible Way the Contribution To the Food Program"]

[Excerpts] Sheki, 22 November. The persistent introduction into production operations of scientific and engineering achievements and leading experience -- such as the requirement handed down during the November (1982) Plenum of the CC CPSU, on the basis of which the livestock breeders in Shekinskiy, Agdamskiy and Khanlarskiy Rayons achieved considerable successes in introducing scientifically sound technologies for the production of meat, procuring feed and reproducing the cattle herd. Today, in Shekinskiy Rayon, the largest producer of beef in the republic, a seminar-conference for the 1st secretaries of oblast, municipal and rayon party committees of the Transcaucasus republics began its work. The seminar-conference is dedicated to the problems concerned with the intensification of animal husbandry and feed production, in light of the requirements handed down during the 26th CPSU Congress and the May and November (1982) Plenums of the CC CPSU. It was organized by the Agriculture and Food Industry Department of the CC CPSU and the Central Committee of the Communist Party of Azerbaijan.

The Presidium included the 1st secretary of the Central Committee of the Communist Party of Azerbaijan K.M. Bagirov, a secretary of the Central Committee of the Communist Party of Azerbaijan I.A. Mamedov, a secretary of the Central Committee of the Communist Party of Georgia D.I. Patiashvili, the deputy chief of the Agriculture and Food Industry Department of the CC CPSU V.K. Onisovets, an executive of the CC CPSU I.N. Kuz'min, deputy chairman of the Council of Ministers for the Azerbaijan SSR Sh.A. Rasi-zade, the 1st secretary of the Nakhichevan Oblast Party Committee K.N. Ragimov, the 1st secretary of the Nagorno-Karabakhskaya Oblast Party Committee B.S. Kevorkov, the chief of the Agriculture and Food Industry Department of the Central Committee of the Communist Party of Armenia N.K. Ayvazyan, the chief of the Agriculture and Food Industry Department of the Central Committee of the Communist Party of Azerbaijan R.D. Dzhamilov and chief of the Water Resources and Rural Construction Department of the Central Committee of the Communist Party of Azerbaijan Z.F. Musayev.

The seminar-conference was opened with an opening address by the 1st secretary of the Central Committee of the Communist Party of Azerbaijan Comrade K.M. Bagirov

Speech by Comrade K.M. Bagirov

In the Food Program, as emphasized by Comrade Yu.V. Andropov, "the specific tasks for all of the union republics are clearly defined. And each such task must be worked out in a thorough manner in the interest of making a real contribution, in the immediate future, towards this most important work of continuously supplying our Soviet people with food goods.

A chief trend in carrying out this party and national task is that of further raising the level of party management for agriculture, developing and intensifying animal husbandry and feed production, steadily increasing the production and procurements of meat, milk and eggs and ensuring that the population is continuously supplied with high quality food products and in a manner so as to achieve the maximum possible degree of self-support in this regard.

As you can well understand, these problems are complicated and require a maximum mobilization of forces and a concentration and coordination of actions by the party committees, the RAPO [rayon agroindustrial association], scientists, specialists, leaders, the primary party organizations of farms and all labor collectives.

The purpose of our seminar-conference consists of summarizing the accumulated experience, analyzing the shortcomings, uncovering reserves and, on this basis, defining the means for further intensifying animal husbandry and feed production. Based upon the successful operational practice of farms in Shekinskiy, Agdamskiy and Khanlarskiy Rayons, we see the goal of the seminar as being that of introducing a technology for producing meat on an industrial basis and intensifying feed production and the mechanization of feed preparation, in the interest of raising young cattle stock, reproducing the herd and disseminating leading experience throughout the republic in a better manner.

An equally important task of the seminar is to disseminate the operational experience of the party organizations and their training and instruction among the livestock breeders and also to disseminate the new forms for the socialist competition and for issuing moral and material incentives to leading production workers.

We in Azerbaijan value very highly the rich and diverse experience of the party organizations of fraternal Georgia and fraternal Armenia in managing the economy and one of its principal components -- agriculture.

We are confident that participation in the work of the seminar by the party workers of Georgia and Armenia will raise its practical value and transform our meeting into a type of creative laboratory for studying the experience of party management in the development of animal husbandry in the Transcaucasus republics. We hope that this will be promoted by the guests becoming

acquainted with the leading farms and with the work and life of workers in the Azerbaijan countryside where you are being awaited as good friends and brothers. I believe that such an exchange of experience must become a planned and systematic event in all spheres of economic, party-political and cultural life of our republics.

Comrades! As emphasized during the May Plenum of the CC CPSU, the conversion of all branches of the agroindustrial complex over to mainly intensive growth factors -- is the most efficient and practically the only possible means for solving the Food Program. Guided by this party instruction, confirming the redirection towards practical work in all sectors of agricultural production and relying upon the valuable experience accumulated during the 1970's and 1980's, the party organization of Azerbaijan, during this pivotal year of the five-year plan, is directing the efforts of workers in the rural areas of Azerbaijan towards the unconditional fulfillment of all plans and socialist obligations. And the kolkhoz and sovkhoz workers, having overcome the poor weather conditions and having displayed a high level of organizational ability, discipline and creativity, are successfully solving the tasks confronting them. The plans and obligations for selling grain, raw cotton, grapes, vegetables, fruit, potatoes, melon crops, green tea leaves and cocoons of the mulberry silkworm moth have been overfulfilled to a considerable degree.

Today animal husbandry accounts for approximately one third of the republic's gross agricultural output. This represents a considerable amount. And it is gratifying to note that this vitally important branch of agriculture is developing on the whole at an accelerated tempo and that animal husbandry operations are being carried out on a profitable basis in a majority of the rayons and farms. At the same time, we are well aware that many unresolved questions, complicated problems and areas of neglect still remain in connection with development of the branch. The productivity of the livestock is still lagging behind the all-union indicators, serious shortcomings are inherent in the work being performed by the zooveterinary and breeding services, the feed base is only slowly being developed and so forth. While concentrating the efforts of the party organization and all workers attached to the agro-industrial complex on carrying out the unresolved tasks, the republic's party organization is at the same time implementing a broad complex of measures aimed at achieving unconditional fulfillment of all tasks set forth in the Food Program and defined by the Plenum of the Central Committee of the Communist Party of Azerbaijan. This is expressed specifically in the following figures: in 1985 and compared to 1981, we must increase the volume of meat production by 53 percent, milk -- 26, eggs -- by 62 percent. And regardless of the complicated nature of this task, we can and must fulfill it. Our confidence is based upon the fact that today our animal husbandry and feed production operations have a strong logistical potential at their disposal; we have developed fine cadres of specialists and experts at achieving high milk yields and weight increases.

Report by Comrade V.K. Onisovets

From the standpoint of our party's central committee, greater exactingness is now being imposed upon the party organizations for the status of affairs in animal husbandry. It is recalled that only this year the CPSU Central Committee

listened to reports concerning work being carried out in animal husbandry by the Central Committee of the Communist Party of Latvia and the Khmel'nitskiy and Sverdlov oblast party committees and also on matters concerned with strengthening the feed base for animal husbandry by the Central Committee of the Communist Party of Belorussia. Serious comments concerning shortcomings in the development of animal husbandry were handed down in the CPSU Central Committee during the course of listening to reports on the work of the Krasnoyarsk Kray and the Belgorod, Irkutsk, Saratov, Yaroslavl and some other oblast party committees.

The problem was established in a manner such that the programs planned for the various areas and approved by the government for increasing the production of meat, milk, eggs and other farm products must not only be fulfilled but even over-fulfilled to a considerable degree. This constitutes a decisive condition for ensuring that our population is supplied with the necessary food products and, in addition, for raising the standard of living for our Soviet people. Thus it follows that this task is considered to be of priority importance for each party, soviet and economic organ.

The carrying out of the complicated and difficult tasks confronting us at the present time, during this final stage of the five-year plan, requires a great amount of effort on the part of all of us. In addition to carrying out their current plans, many farms and rayons must also make up for the shortfall in output which occurred during the initial years of the five-year plan, they must join in the rhythm of this plan and create a reliable foundation for work during the 12th five-year period. It bears mentioning that a great deal is being accomplished in this regard and also that a great deal of work has already been carried out. In 1983, worthy increases were achieved in the production and procurements of the principal types of animal husbandry products. For example, compared to the same period for last year, milk purchases since the beginning of this current year have increased by 5.1 million tons or by 10 percent, meat -- by 1 million tons or by 8 percent and eggs -- by 1.6 billion units or by 4 percent. All of this is having a positive effect on the organization of trade in these products and fine prerequisites have been created for further intensifying their production. The CPSU Central Committee believes that a direct obligation and matter of honor for workers attached to party, soviet and economic organs is that of consolidating the positive results already achieved in animal husbandry and, on this basis, ensuring the attainment of new advances in developing the branch.

It is expected that agricultural workers and workers attached to other branches of the APK /agroindustrial complex/ for the Transcaucasus republics will play an important role in implementation of the country's Food Program and, in particular, in solving the problem associated with ensuring that the population is supplied more completely with meat and dairy products. It is generally well known that animal husbandry in the Transcaucasus republics has always been, is and will continue to be a traditional branch, especially dairy and beef cattle husbandry and sheep raising. At the same time, the level achieved in the development of animal husbandry and the present production volumes for meat, milk and other products in the Transcaucasus are still lagging considerably behind the increasing requirements of the population for these products. This fact is obviously understood by the overwhelming majority

of leaders of kolkhozes, sovkhoses and rayons in our region. However, up until recently the practical actions of many farm leaders and also the leaders of organizations at the rayon and republic levels have not been genuinely aimed at correcting this abnormal situation. Indeed the situation as it developed is well known -- new lands were mastered and immediately they were turned into orchards, vineyards, tobacco plantations and so forth. The entire increase in mineral fertilizers was channeled for use in this regard. In the final analysis, priority consideration was not given to the development of feed or to animal husbandry. Hence the result -- last place in the country in the productivity of animal husbandry and in supplying the population with internally produced meat and dairy products.

This attitude is changing at the present time, but still very slowly. In their food programs for the current five-year plan, almost all of the rayons have recorded very weak rates of growth for meat production (14-17 percent) and even lower for milk -- 10-17 percent. During the first 2 years, many farms in the region exceeded their planned increase and this certainly does not promote the development of a creative competition or a tense campaign to fulfill the plan.

The chief goal of the Food Program as developed is that of ensuring that the country's population is supplied with food products as rapidly as possible. In the case of a number of products and particularly meat and dairy products, the per capita consumption levels must be raised to scientifically sound norms. It bears mentioning that one of the most urgent tasks confronting the Transcaucasus republics is that of raising the per capita consumption levels for meat, milk and eggs by means of internal production. Thus, in carrying out the production plans for animal husbandry products during the current five-year plan, thought must also be given at the present time to the future development of the branch during the 12th Five-Year Plan, at which time the rates of growth must be considerably higher than they are at the present time. You have developed the Food Program for your own republics and you know, for example, that by 1990 meat production in Georgia must increase by 37 percent, in Azerbaijan -- 23 percent and in Armenia -- 28 percent, above the planned levels for the 11th Five-Year Plan.

In examining the problems and tasks associated with the development of animal husbandry in the Transcaucasus republics, we cannot overlook the fact that internally produced meat still constitutes 50-60 percent of the overall market fund here and milk -- 25-30 percent. Each year the Transcaucasus republics receive large quantities of eggs and potatoes from the all-union fund.

The chief factor delaying growth in the production of farm products -- the continuing low level of productivity for public livestock. For example, let us take the milk yield per cow. Although this figure has increased somewhat over the past 5 years, it nevertheless continues to be one of the lowest in the country. In the Armenian SSR the average annual growth in milk yield per cow during this period was 37 kg, in Azerbaijan -- 62 kg and in Georgia a decrease instead of an increase took place during these years in the productivity of the dairy herd (by 81 kg).

The same can be said regarding the weight conditions for cattle sold for slaughtering purposes: in the Georgian SSR the average delivery weight for cattle increased during the five year period by only 6 kg and amounted to 254 kg in 1982, in Azerbaijan it increased by 55 kg and amounted to 300 kg and the livestock breeders in Armenia furnished cattle in 1982 weighing 310 kg, an increase of 30 kg. It bears mentioning that in 1982 the average weight of cattle sold to the state by the country's kolkhozes and sovkhoses was 350 kg. The average egg production of laying hens in the Transcaucasus continues to remain low.

When these matters are discussed with workers attached to party organs, ministries and departments, the comrades tend to attach paramount importance to the low productivity of local cattle, the low forage crop yields, the inadequate level of mechanization and other factors.

Yes the conditions found in the Transcaucasus should not be equated with other regions of the country. Here one encounters limited agricultural land areas, poor land contours and relief, mountains and a number of other adverse factors. But there are also many positive features: this includes a longer growing season, a large amount of sun and warmth, an adequate number of water sources for irrigation purposes and, finally, many years of experience in obtaining high field crop yields from small tracts of land. And it bears mentioning that perceptible and fine results are achieved in those areas where the local organs apply themselves to animal husbandry operations and feed production in a persistent and attentive manner.

If we examine the problem of supplying feed for all of the livestock in the region, then it must be stated that in recent years a definite amount of work has been carried out in the Transcaucasus republics in connection with strengthening the feed base for animal husbandry. Compared to the 10th Five-Year Plan, the average annual procurement of coarse and succulent feed during the current five-year plan on farms in the Georgian SSR increased by 11 percent, Azerbaijan SSR -- by 38 percent, Armenian SSR -- by 31 percent. At the same time, the production and procurement volumes for this feed continue to lag behind the animal husbandry requirements.

The amount of coarse and succulent feed being procured per standard head is completely inadequate; against a norm calling for 18-20 quintals, the farms in Azerbaijan are placing in storage for winter use only 12-15 and Georgia and Armenia -- 11-14 quintals of feed units.

The reasons for this situation stem mainly from the fact that the farm leaders are still not attaching proper importance to feed production operations. By no means are feed production operations being carried out on a specialized basis at kolkhozes and sovkhoses in the Transcaucasus republics. Actually this important branch, just as in the past, does not have a master -- it remains independent.

The structure of the feed fields is far from perfect, the cropping power of the forage crops and natural feed lands is low, insufficient use is being made of progressive technologies and work aimed at strengthening the logistical base for the storage of feed is being carried out at a slow tempo.

The proportion of perennial grasses in the feed crop structure is inadequate; a high proportion is occupied by less productive annual grasses. On farms in the Georgian SSR, perennial grasses occupy only one third of the forage crop sowing area and annual grasses -- almost one half.

Annual grasses contain very small amounts of leguminous grasses or mixtures of them. In the Armenian SSR, the proportion of corn in silage crop sowings is low -- 44 percent.

The cropping power of forage crops continues to remain extremely low. Here is some data in this regard. In Azerbaijan the hay harvest from perennial grasses in recent years has amounted to 50 quintals per hectare and in Armenia -- 37 and Georgia -- 30; in the case of silage crops the figures are 81, 132 and 79 quintals respectively. In 1982, in Azerbaijan, 28 quintals of feed units were obtained from each hectare of forage crop, in Armenia -- 21 and in Georgia -- 18 quintals.

On farms throughout the republics, leading technologies for the cultivation of forage crops are being introduced into operations very slowly and only small quantities of fertilizer are being applied. In Azerbaijan, an average of approximately 30 kg of active mineral fertilizer agent is being applied per hectare and in Georgia -- 80 kg.

In the Transcaucasus republics there are considerable areas of natural feed lands. However, their status from a soil improvement standpoint continues to remain extremely unsatisfactory. Of 2 million hectares in Georgia, improvements have been carried out on only 44,000 hectares of meadows and pastures, in Armenia of 800,000 -- 37,000 and in Azerbaijan -- of 2.1 million hectares only 12,000 hectares of meadow and pasture land have been improved.

Each year the plans for radically improving meadow and pasture lands are not being fulfilled. In 1982, only 700 hectares were improved in Georgia against a plan calling for 11,500 hectares, in Azerbaijan -- 400 hectares against a plan calling for 7,000 hectares and in Armenia -- 2,000 hectares against a plan calling for 11,100 hectares to be improved.

For all practical purposes, no fertilizer is being applied to the meadows and pastures. An average of approximately 5 kg is being applied to each hectare of such land on farms in Armenia, in Georgia -- slightly more than 1 kg and in Azerbaijan -- less than 1 kg of active mineral fertilizer agent. Thus the farms are obtaining only 7-9 quintals of feed units from each hectare of natural haying land.

Insufficient attention is being given to the quality of the feed. Feed studies for quality purposes are being conducted in only limited numbers. This year checks were carried out on the quality of hay on farms in the Georgian SSR for just slightly more than 20 percent of the volume procured, in the Azerbaijan SSR -- approximately 30, Armenian SSR -- less than 20 percent. At kolkhozes and sovkhoses in the Armenian SSR, no studies are being carried out on the quality of the grass meal.

Meanwhile, the quality of the feed being procured is deteriorating. For example, the procurement of 1st and 2d class hay on farms in the Georgian SSR

decreased by 12 percent compared to the same period for last year, the Azerbaijan SSR -- by 2 percent and the Armenian SSR -- by 5 percent. The procurements of low grade hay in the Georgian SSR increased by 6 percent, Azerbaijan SSR -- 1 percent and the Armenian SSR -- by 15 percent.

Progressive technologies for procuring and storing feed are being introduced into operations only slowly. Last year the procurements of pressed hay in the Georgian SSR amounted to 18 percent, the Azerbaijan SSR -- 26 and the Armenian SSR -- 31 percent of the overall volume of procurements. The forced ventilation method for procuring vitamin hay is generally not being employed.

The construction of feed storehouses is being carried out at insufficient rates. The availability of storehouses for haylage and silage on farms in the Georgian SSR is 71 percent, Armenian SSR -- 61 percent. Very few storehouses are available for grass meal, granulated and briquetted feed or for food roots.

A summary of all that has been stated thus far reveals that all is not going well in feed production. At the same time, it bears mentioning that the kolkhozes and sovkhoses in our republics have many reserves and unused opportunities at their disposal for sharply improving the availability of feed and, it follows, for raising the productivity of animal husbandry in a more rapid manner.

It cannot be said that the intensification of feed production operations is being overlooked by the party committees and soviet and economic organs. Measures are being undertaken at each kolkhoz and sovkhos and in the republic organs aimed at strengthening the feed base. These measures were approved at plenums of the rayon party committees. Unfortunately however, these real, sound and approved measures "remain on paper" as the saying goes. The party committees must deal very strictly with those who are responsible for carrying out the various decisions.

Are we really not authorized to reproach the specialists at many kolkhozes and sovkhoses for their extremely unsatisfactory work in reproducing the herd? Indeed this must be one of the reasons for the low productivity of the dairy herd in the Transcaucasus republics. Over the past 10 years, there has practically been no increase in the output of calves and lambs. In 1982 an average of 71 calves was obtained from 100 cows in the Azerbaijan SSR and from 100 sheep -- 81 lambs. These indicators were worse in 1981. Last year only 67 percent of the cows in the Georgian SSR had calves and at many kolkhozes and sovkhoses only one calf was obtained for every two cows.

Serious shortcomings exist in the organization of breeding work, in feeding the livestock and in combating livestock diseases. Artificial insemination is poorly organized at a majority of the kolkhozes and sovkhoses and this leads to barrenness in a considerable portion of the brood stock. Accounting and reporting work is organized very poorly on many farms and intra-farm slaughtering of livestock is greatly overstated.

Comrades! The year 1983 is coming to a close. The agricultural workers are troubled by many concerns at the present time. The field work has still not

been completed; the fall plowing has not been carried out in all areas and in some areas there are late crops still waiting to be harvested. Equipment repair work is in progress and seed cleaning work is being carried out. But at the present time all agricultural workers must concentrate their principal attention on the farms and on those areas where a very important and very tense period is at hand -- the livestock wintering period. The animal husbandry results for both this year and next year will be greatly dependent upon the manner in which the indoor maintenance period for the livestock is carried out, upon how well the farms are prepared, upon how well they are supplied with feed and upon the manner in which organizational and political work is carried out in the collectives.

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LIVESTOCK

MILK SUBSTITUTE PROMOTED AS CATTLE FEED IN LITHUANIA

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 2 Dec 83 p 2

/Article/ by V. Vaytkus, G. Stankyavichyus and R. Bagdzyavichene, scientific workers at the Lithuanian Branch of the All-Union Scientific Research Institute of the Butter and Cheese Making Industry and T. Khomentauskas, assistant professor at Vilnyus State University imeni V. Kapsukas: "Where Milk Is Being Lost"/

/Text/ Our country accounts for 24 percent of the world's production of milk. And our population constitutes only six percent of the earth's population. That is, our potential opportunities for satisfying the requirements for dairy products are higher by a factor of 3.7 than the average international level. Are we making the most of these opportunities? Indeed the efficient utilization of milk is equivalent to increasing the number of dairy cows or raising their productivity. Let us examine this problem using the Lithuanian SSR as an example.

Last year the republic's agriculture produced milk containing 80,000 tons of protein. Roughly 25 percent of this amount remained on the farms for feeding to the young stock, with the remainder being sold to industry. There one third of the protein was included in food products following processing and 40,000 tons were returned to agriculture by the dairy mills in the form of skim milk, buttermilk and whey. That is, one fourth of the protein was made available to the people, with the remainder being placed at the disposal of the livestock in various forms.

In order to take into account all of the protein resources, mention should be made of the fact that the defatted milk that is fed to the livestock is in fact converted into meat and thus returned to the people. In a ratio of 9 grams of milk to 1 gram of meat. Nevertheless, of the overall mass of milk protein produced in Lithuania, 46.3 percent was fed irretrievably to the livestock in one form or another. This was calculated accurately. That is, almost one half of the cows being maintained on farms throughout the republic consumed feed, occupied livestock facilities and did not furnish marketable products.

The use in this manner of this valuable food product can scarcely be tolerated. But how can the situation be corrected? It is our opinion that the production of whole milk substitutes must first of all be increased. In terms of their

structure they are close to cow's milk and this makes it possible to introduce them into the rations for calves almost at once, commencing with their first days of life.

The production of dry whole milk substitutes was mastered by the country's industry almost 20 years ago. But even today the requirements for these substitutes in Lithuania are being satisfied by only 12.5 percent. Their production is increasing, but slowly. This is caused first of all by the fact that the production of dry ZTsM /whole milk substitutes/ requires the construction of special departments and the expenditure of tremendous amounts of energy: initially for evaporating the skim milk and subsequently for heating the diluted mixture on the farms.

None of this is required for the production of liquid ZTsM. They can be prepared at existing production sites of dairy mills using traditional equipment. Several recipes for liquid ZTsM have been developed at the Lithuanian Branch of the All-Union Scientific Research Institute of the Butter and Cheese Making Industry. Distinct from the dry substitutes, they possess a healing and prophylactic property -- an acidophilic bacillus, antibiotics, vitamins and natural fats not found in human food are added to them.

Several thousand tons of liquid substitutes have already been produced at an experimental-production plant of the Lithuanian Branch of this institute. They were used mainly on farms in Kaunasskiy Rayon and it turned out that one ton of sour milk liquid ZTsM makes it possible to make more whole milk available for feeding to people and thus a savings of from 64 to 220 rubles is realized.

By providing the farms with sour milk ZTsM, we create conditions whereby it is sufficient to leave the farms with only 4.5 percent of the milk required for satisfying their needs instead of the usual 25 percent. As you can see, this represents a considerable reserve for industry. Moreover the production of liquid substitutes can be organized both at dairy mills and within agriculture itself. Three such departments were established in Lithuania based upon initiative displayed by workers at VNIIMS /All-Union Scientific Research Institute of the Butter and Cheese Making Industry/. For example, one is located at the Zheymyay Kolkhoz in Ionavskiy Rayon. They have fully justified their existence. The average daily weight increase in young stock has been raised by 120 grams. They have been paid tens of thousands of additional rubles for making whole milk available, which the kolkhozes turned over to industry.

These examples underscore the national economic value being attached to organizing the industrial production of liquid ZTsM. It is especially advisable in krays, oblasts and republics where large quantities of milk are being produced and where the farms and plants are located not far from one another. There is a good basis for the liquid ZTsM's being fed to calves on an ever increasing scale in such republics as the RSFSR, UkSSR, BSSR and LaSSR. On the whole, the production of this valuable product throughout the country exceeds 400,000 tons. And in our republic, notwithstanding the fact that it is a pioneer in this area, the production of liquid ZTsM's has practically been terminated. Two deputy ministers -- P. Grityunas of the meat and dairy

industry and V. Stankyavichyus of agriculture -- have for several years now been shelving our proposals, although they understand well the essence of the problem. Could it be that they wish to avoid additional problems? But the indicator for milk marketability in the republic is lower than the average union figure.

The efficient utilization of milk is not an easy task. The solution for it requires the use of a comprehensive approach. This includes strengthening the production-technical base of the enterprises, improving the milk processing operations, lowering the norms for returning defatted milk to the farms and examining the existing prices for secondary dairy raw materials which are clearly too low at the present time. And, finally, the development of liquid ZTsM's. The implementation of all of these measures will make it possible to achieve a higher level of production efficiency on the whole. That is, to satisfy more completely the population's requirements for valuable food products.

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HOG BREEDING RESEARCH AT BELORUSSIAN SCIENTIFIC INSTITUTE

Moscow SVINOVODSTVO in Russian No 11, Nov 83 pp 17-19

/Article by V. Vasil'yev and M. Kovalev, Belorussian Scientific Research Institute of Animal Husbandry: "Breeding Center at the Belorussian Scientific Research Institute of Animal Husbandry" /

/Text / The breeding center of the Belorussian Scientific Research Institute of Animal Husbandry is the republic's head scientific research institute for the development and introduction of new forms and methods of the breeding of farm animals ensuring the further improvement in breeds and increase in their productivity, for the development of long-term breeding programs for animal species and breeds, for the improvement of existing and development of new intensive breeds, lines and types meeting the requirements of industrial animal husbandry, for the organization of the raising, evaluation and breeding of sires for state pedigree stock enterprises and specialized farms and for other problems of genetics, breeding and reproduction of cattle, hogs, sheep and horses. Furthermore, the breeding center coordinates all the work on breeding done in the republic by other scientific research and agricultural educational institutions.

It includes 11 scientific laboratories, 8 shops and a central station for the artificial insemination of farm animals, which in 1980 were unified into the Budagovo Experimental Production Farm. I. N. Nikitchenko, doctor of agricultural sciences, professor, deputy director of the Belorussian Scientific Research Institute of Animal Husbandry, heads the breeding center.

In 1975 the breeding center was included in the Plemtsentr Central Scientific Production Association for the Breeding of Farm Animals. It includes 24 pedigree stock farms and the Budagovo Experimental Production Farm. A total of 126 people, including 50 scientific workers, of whom 6 are doctors and 34, candidates of sciences, work in the scientific laboratories of the breeding center. Its laboratories plan and conduct research on the basis of subject assignments according to unified overall programs approved by the Belorussian SSR Ministry of Agriculture.

Breeding scientists provide scientific-methodological help to the republic's livestock breeders through the issue of methodological directives and recommendations on various problems of pedigree stock breeding and reproduction of

farm animals, press articles, radio and television appearances, seminars, courses, competitions and the presentation of lectures and reports. A total of 30 recommendations and methodological directives and more than 100 books and pamphlets have been published.

The workers of the breeding center are constant participants in the Exhibitions of USSR and BSSR National Economic Achievements. Diplomas and medals have often been awarded to them. Authorship certificates have been received for 12 developments.

The laboratory for the development of new methods of breeding and creation of specialized lines develops specialized lines of hogs for the republic hybridization system. In the shop for testing breeds and lines for combinableness at the Budagovo Experimental Production Farm and the Krasnaya Zvezda Pedigree Stock Farm the laboratory workers jointly with specialists are completing the development of the fattening type of hog of the large white breed. The same shop, as well as the Dobrushskiy Pedigree Stock Farm and the Zarech'ye Horse Breeding Farm, is developing the Belorussian meat type of hog on the basis of two specialized lines. In breeding herds the multiple pregnancy of the sows of the developed types constitutes 11.8 hoglings, the weight of the clutch during weaning, 189 kg, the average daily gain in the live weight in control fattening, 750 kg and feed expenditures per kg of gain, 3.45 fodder units. Together with the workers of the institute's division of pork production technology and the laboratory of computing-analytical research the high efficiency of utilization of boars of the developed fifth line on two-breed sows obtained from the crossing of the large white and the Belorussian black and white breeds has been checked and demonstrated. This variant of breed-line crossing, which under the conditions of industrial technology makes it possible to obtain 659 grams of the average daily gain in the live weight with an expenditure of 4.15 fodder units, has already found application at a number of commodity farms and complexes.

In the shop for testing breeds and lines for combinableness the laboratory workers jointly with scientists at other institutes in the country have begun the development of a Soviet meat breed of hogs, in which hogs of the developed sixth line will constitute one-fourth of the thoroughbredness.

The laboratory workers are engaged in scientific and methodological guidance of the breeding work of the shop for testing breeds and lines for combinableness.

The laboratory for computing-analytical research develops new methods of evaluation of animals and management of large-scale breeding on the basis of the achievements of population genetics and modern computer equipment.

Jointly with the specialists of the Belorussian SSR Ministry of Agriculture and workers of other scientific subdivisions systems of pedigree work in cattle and hog breeding have been developed. They ensure a significant increase in the potential for animal productivity through large-scale breeding and the heterosis effect in interbreed crossing and hybridization. For an operative control of the introduced system technologies for the processing and genetic-mathematical analysis of pedigree recording data in hog breeding on punchcard and small Promin' and Nairi computers have been proposed.

The laboratory workers in cooperation with the specialists of the Republic Head Information Computer Center of the Belorussian SSR Ministry of Agriculture and the Belorussian Planning and Technological Institute of Automated Control Systems have developed a set of seven problems for the processing and analysis of pedigree recording data for hog breeding control-testing stations with the use of modern YeS-1022-type computers accelerating the analysis more than 25-fold. The scientific and technical council of the Belorussian SSR Ministry of Agriculture has recommended these problems for inclusion in the republic automated system for the control of agriculture. Methods of analysis of the genetic components of the heterosis effect, mathematical modeling of the breeding process, long-term forecasting of the breeding effect, early evaluation of the productivity of hogs on the basis of mathematical modeling of the metabolism, construction of breeding indicators and so forth have been proposed for the first time in Soviet hog breeding.

The laboratory for the immunogenetics of farm animals develops and introduces methods of genetic control over breeding processes in animal populations during the development of highly productive, new lines, types and breeds of hogs and creates new techniques of breeding for resistance to diseases by means of immunological shock and hog breeding for resistance to ascariasis. Furthermore, the laboratory organizes and introduces immunogenetic control over the origin of young pedigree stock in the republic. Jointly with the specialists of the production group for a genetic expert examination it annually tests the entire stock of sires and young animals for control-testing stations.

The laboratory for ecological genetics of farm animals studies the genetic nature of adaptive reactions of the animal organism and develops methods of control over these reactions for the detection and construction of genotypes combining the best productivity and adaptability of animals to industrial technology. In particular, the genetic mechanisms of predisposition of hogs to diseases most characteristic under conditions of industrial technology are studied and methods of breeding for resistance to the studied pathologies are developed.

For an early detection of hoglings predisposed to stress a method of diagnosis of the stress syndrome by means of the narcotic halothane has been mastered and modified. A scientific and methodological guidance of the introduction of a genetic expert examination of the origin of pedigree animals in the republic is carried out jointly with the laboratory for immunogenetics.

The laboratory for hog breeding improves existing and develops highly productive, new breeds and intrabreed types of hogs.

A new breed of hogs (Belorussian black and white) and an intrabreed type of the large white breed (BKB-1) have been developed. They are noted for a high productivity and efficiency during industrial crossing with animals of other breeds, a strong constitution and adaptability to local conditions and industrial raising technology. They are planned for all the regions of Belorussia and are utilized for crossing between themselves and with boars of specialized bacon breeds (Estonian bacon and Landrace breeds). The average multiple pregnancy of sows constitutes 10.5 hoglings, milkiness, 78 kg and the weight of the clutch at the age of 2 months, 180 kg. The animals are characterized by

the following indicators: the age of attainment of a live weight of 100 kg, 182 days for the Belorussian black and white breed and 177 days for the KBK-1 intrabreed type; the average daily gain in the live weight, 748 and 751 grams respectively; the content of meat in the carcass, 55 and 56 percent; fodder expenditures per kg of gain in the live weight, 3.92 fodder units.

One specialized fattening type of hog (average daily gain in the live weight, no less than 770 grams; fodder expenditures per kg of gain in the live weight, no more than 3.7 fodder units) and one meat type of hog (thickness of lard above the 6th and 7th breast vertebrae, no more than 28 mm) bred for mutual combinableness during crossing are now developed in every breed.

The laboratory directs the breeding process on all the hog breeding farms of the Plemtsentr Scientific Production Association and the work of the shop for control fattening of the Budagovo Experimental Production Farm.

The laboratory for reproduction biology works out problems of the theory and practice of storage of the boar sperm. The role of energy forming and hydrolytic enzymes, phospholipids, glycolipids and fatty acids in the vital activity of sex cells, as well as the change in the biochemical composition of enzymes depending on the age and breed of boars and the season, has been established. Methods of forecasting and increasing the fertility of the sperm have been developed. A connection of the fatty acid composition and of the activity of sperm enzymes with the cold resistance of sex cells has been detected and on this basis methods of increasing their cold resistance have been developed. Metabolic processes in the boar sperm preserved at room temperature have been studied and a method of increasing the conception rate of sows at industrial complexes has been developed. The positive effect of a 2-hour incubation of the boar sperm before its dilution by a glucose-chelate-citrate-yolk medium has been demonstrated. A sperm sedimentation index-reaction has been proposed for an evaluation of the quality of the ejaculate. The developed technology of evaluation and utilization of the sperm increases the efficiency of the artificial insemination of hogs under the conditions of large complexes.

The shop for the testing of breeds and lines for combinableness is an industrial-type hog breeding complex with a completed turnover of a herd of an annual capacity of 11,800 head. Its tasks include the development of new specialized lines and types of hogs for the republic system of hybridization, study of their combinableness, evaluation of the meat and fattening qualities of hogs according to their productivity and by the control fattening method and raising and sale of highly productive young pedigree stock of new lines. The shop consists of four sectors, that is, for reproduction with a boar barn for 80 head, an artificial insemination laboratory, a building for barren sows (for 128 head) and young replacement stock (for 440 head) and a barn for sows during the second half of pregnancy (for 320 head); for reproduction with three breeding houses (120 stalls in each) for obtaining and raising hoglings up to the age of 3 months; for young pedigree stock with a barn for 1,080 head; for control fattening for 430 places for individual and group (four head) keeping of young stock.

The shop for the evaluation of boars according to the quality of the progeny was established in 1965 for testing the boars and sows of the republic's pedigree stock plants and farms according to the fattening and meat qualities of the progeny. The shop's data are also utilized for a comparative evaluation of breeds, intrabreed types and plant herds and for the determination of the breeding shift according to the years and generations of animals.

In two hog houses 1,000 head of young stock from 78 to 82 boars and 250 sows are annually evaluated and the results are subsequently utilized in pedigree work.

During this work the average daily gain in the live weight of hogs of the large white breed rose from 600 to 735 and of the Belorussian black and white breed, from 638 to 726 and fodder expenditures per kg of gain in the live weight were lowered from 4.66 and 4.61 to 3.75 and 3.8 fodder units respectively, while, at the same time, the thickness of vertebral lard decreased by 4 and 5 mm.

The purposeful implementation of overall programs in the control-testing shops of the breeding center has made it possible to significantly improve the production indicators of the Budagovo Experimental Production Farm and to increase the genetic potential for animal productivity. The young stock gives an average daily gain of 482 grams in the live weight from birth until sale and with fattening, 686 grams. In the best species this indicator exceeds 1,200 grams, while fodder expenditures per unit of gain in the live weight are 1.8 fodder units. The experimental production farm annually sells about 3,000 pedigree hogs of new specialized lines, including more than 800 boars, to state pedigree enterprises, industrial complexes, kolkhozes and sovkhoses. A rational utilization of these animals has a significant effect on an increase in the genetic potential for the productivity of the breeds raised in Belorussia.

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LIVESTOCK

VETERINARY INSPECTION FOR DISEASE CONTROL

Moscow VETERINARIYA in Russian No 11, Nov 83 pp 3-4

/Article: "State Veterinary Control In Keeping With the New Tasks"/

/Text/ The solution for the country's Food Program -- the central task of the current decade -- includes extensive measures aimed at intensifying the production of animal husbandry products. In the process, the plans call for the conversion over to the use of intensive methods for managing the branch and for the productivity of all types of livestock and poultry to be raised considerably.

Within the program, emphasis is placed upon the need for improving the work associated with reproduction of the herd and increasing the yield of young agricultural animals; the implementation of a system of veterinary-prophylactic measures which will make it possible to lower the disease rate and the losses in livestock and poultry; an expansion in and strengthening of the logistical base for the state veterinary service and enterprises of the biological industry.

The veterinary specialists of our country are solving important and responsible tasks associated with the creation of healthy herds, safeguarding the livestock to the maximum possible degree and producing products of a high sanitary quality. In light of the tasks called for in the Food Program, the veterinary service at all levels must perform in an efficient and harmonious manner, particularly in view of the fact that the role being played by state veterinary control is increasing at a rapid rate.

An orderly system of state veterinary control for ensuring supervision over the carrying out of the requirements of the USSR Veterinary Regulations from top to bottom has been created and is in operation throughout the country.

The Veterinary Regulations -- and this point bears emphasizing -- is the basic document which defines the tasks of the veterinary service, the rights and obligations of the veterinary workers and also the responsibilities of the leaders of kolkhozes, sovkhozes and other enterprises, organizations and institutes and also citizens -- the owners of livestock in connection with the prevention and elimination of infectious and non-infectious diseases of livestock, poultry, fur-bearing animals, fish and bees.

Included among the tasks confronting the country's veterinary service are a number of large and important problems, the solutions for which require daily and tense work on the part of all veterinary specialists.

Over the past few years the logistical base of the veterinary service has been strengthened considerably and a noticeable increase has taken place in the availability of transport equipment and special purpose vehicles. Dozens of new and effective medical means and methods for diagnosing animal diseases have been adopted and introduced into operational practice on an extensive scale and this has had a positive effect with regard to improving the epizootic status of individual farms, rayons and entire zones throughout the country.

The proportion of infectious diseases in animals has been lowered considerably and this has brought about a change in the overall operations of veterinary specialists. It is now possible to channel more resources and funds for preventing and combating non-infectious diseases, improving the sanitary culture in animal husbandry, producing higher quality products and for protecting the environment against contamination.

An important lever for administering the veterinary service is that of efficiently organized control and the carrying out of checks upon the fulfillment of tasks. Such actions will aid in uncovering and eliminating shortcomings, with consideration being given to correcting the work situation and raising its efficiency. Control is a means for instilling in each worker a sense of responsibility, business-like efficiency and discipline.

By way of control, the Gosvetinspektsiya [State Veterinary Inspection] of the Main Administration of Veterinary Science of the USSR Ministry of Agriculture regularly carries out checks on the organization of a complex of measures aimed at combating infectious and non-infectious diseases in livestock and poultry; on the course of the wintering program for the animals and veterinary-sanitary work carried out during the driving and movement of cattle to distant pastures; on the status of reproduction of the animals and their proper safeguarding and on many other problems associated with the work of the veterinary service.

During the course of such checks, an analysis is undertaken of the epizootic situation and the fulfillment of plans for anti-epizootic measures and control is exercised over the veterinary-sanitary situation at livestock farms and complexes, meat processing enterprises, leather raw material bases and storehouses and other installations and also over the regime for the storage, transporting and use of biological and other preparations, medicines and disinfection means and also over special motor transport equipment.

These same problems are being solved by the state veterinary inspections of the agricultural ministries of union republics, with control being exercised over the work of the veterinary specialists in each rayon and at each farm and enterprise.

Here it is quite appropriate to mention the fact that all of the livestock farms and complexes must be fenced and have sanitary-preventive disinfection

units and other sanitary items of equipment. In addition, the animals must be vaccinated in a timely manner against infectious diseases and constant administrative and veterinary control must be exercised over the distribution, trading in and procurement of livestock and animal husbandry products.

The veterinary specialists and farm leaders are well aware that animals with chronic diseases cannot be retained in the herds, since this leads to the spread of disease. But unfortunately there are still farms where such animals, for one reason or another, are not being assigned for slaughtering in a timely manner.

As a result of low executive discipline among individual officials and specialists and insufficient exactingness on the part of local veterinary organs with regard to the leaders of farms, enterprises, institutes and organizations, animal husbandry workers and citizens -- the owners of livestock -- in matters concerned with carrying out the USSR Veterinary Regulations on individual farms in various zones of the country, infectious diseases occur in the animals which cause definite economic harm and which require the diversion of resources and funds for the purpose of eliminating them.

In those areas where the requirements of the USSR Veterinary Regulations are observed and carried out at all levels, no special difficulties are encountered in striving to maintain a stable state of epizootic well-being on the farms.

State veterinary control is being carried out at a high level in Novgorod Oblast by the chief state veterinary inspector A.G. Prokof'yev, Vologda Oblast -- A.P. Kuznetsov, Tatar ASSR -- M.G. Nigmatulin, Lithuanian SSR -- A.A. Burakauskas, Latvian SSR -- I.R. Silops and by the inspectors in a number of oblasts in the Ukrainian SSR.

The practical work being carried out by the State Veterinary Inspection of the Chief Administration for Veterinary Science of the USSR MSKh /Ministry of Agriculture/ is based upon information received from the leaders of local soviet and agricultural organs and specific proposals for improving operations aimed at reducing losses caused by diseases and animal epidemics. In accordance with a recommendation by the inspection, the vital problems concerned with providing veterinary services for animal husbandry are examined by the Board of the Ministry of Agriculture in the republic, kray, oblast and rayon organizations. The state veterinary inspections of the administrations for veterinary science of the MSKh for the Lithuanian SSR and the MSKh for the Latvian SSR exercise control over all branches of public animal husbandry.

Any inspection check must uncover the reasons for the development of a particular disease or for a violation of the requirements set forth in the USSR Veterinary Regulations. In addition it must define the means and methods for eliminating the shortcomings noted. Thus a state veterinary inspector of any rank must first of all be a skilled specialist and possess a fine knowledge of the principles of labor legislation and agricultural production on the whole.

It bears mentioning that shortcomings and areas of neglect are to be found in the work being carried out by inspectors and state veterinary inspections in the Kirghiz SSR, Azerbaijan SSR, Georgian SSR, Kazakh SSR, Tajik SSR and also in individual oblasts of the RSFSR. Some state veterinary inspectors in the various oblasts, krays and republics quite often acquire only a superficial understanding of the construction of livestock farms, complexes and poultry factories. The same holds true with regard to exercising control over the operation of animal husbandry facilities. The leaders of farms and agricultural organs must be made to realize that in the absence of birthing departments, veterinary dispensaries and other veterinary installations on the farms, it is practically impossible to eliminate barrenness in the animals or to raise healthy young stock.

In light of the tasks called for in the Food Program, well coordinated and harmonious work must be carried out at all levels in the system of state veterinary control. The efficiency of this work must be raised and executive discipline strengthened in all areas.

The general secretary of the CPSU Central Committee, Yu.V. Andropov, when speaking during a meeting with party veterans in the CPSU Central Committee, noted that: "A socialist society is characterized by conscientious discipline, the result of which is conscientious work. The essence of socialist discipline" emphasized Yu.V. Andropov, "lies in each individual performing to his maximum capability." The leaders of the veterinary services and organs must demand the observance of discipline by each veterinary worker.

The chief state veterinary inspectors for republics, krays and oblasts must increase their control over the carrying out of the plans of veterinary dispensaries and the elimination of animal diseases; more complete use must be made of the right to control the work of the veterinary services of other ministries and departments; improvements must be achieved in the information being obtained and in publicizing the results of inspections; more initiative must be displayed in correcting shortcomings and the soviet and agricultural organs must submit proposals on a more frequent basis for improving veterinary services for animal husbandry and strengthening state veterinary control.

In the process, the principal of high exactingness for leaders, specialists and other executive agents, combined with the need for instilling in them a sense of responsibility for carrying out the requirements of the USSR Veterinary Regulations, must be the foundation for the work being carried out by state veterinary inspectors at all levels. Beyond any doubt, the carrying out of the requirements set forth in the regulations is the responsibility of each veterinary specialist and the leaders of farms, enterprises and institutes and it serves as a guarantee for the successful solving of the tasks confronting the veterinary service.

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AGRICULTURAL MACHINERY AND EQUIPMENT

MISUSE, WASTE OF POL RESOURCES SCORED

Causes of Fuel, Oil Losses Detailed

Moscow SEL'SKAYA ZHIZN' in Russian 28 Jun 83 p 2

/Article by M. Aleksandrov, head of a sector of the USSR People's Control Committee and V. Finogenov, inspector for the USSR People's Control Committee: "Losses From the Oil River"/

/Text/ Do you recall the arithmetic problem in which water was flowing into a basin from one pipe and being withdrawn from it simultaneously via another pipe? It was not a simple matter to determine the amount of time required to fill the basin. Everything depended upon the carrying capacity of the pipes.

And now, if you will, imagine that the basin is being filled up not with water but rather with petroleum products: gasoline, diesel fuel and so forth. The pouring continues and continues and the basin is not being filled up. The problem is understandable: the petroleum products are being consumed for various purposes, including as fuel for transport vehicles. Unfortunately however, in addition to not being used as originally intended, these products are also being squandered. Such was the conclusion drawn by workers attached to the USSR People's Control Committee, who carried out checks on the effectiveness of use of petroleum products at kolkhozes, sovkhozes and other agricultural enterprises in a number of oblasts.

During 2 years of the five-year plan, on farms, at enterprises of Sel'khozkhimiya and Goskomsel'khoztekhnika and at land reclamation organizations in Kursk Oblast, six percent more liquid fuel was consumed than the amount called for in the approved norms, including 12 percent gasoline. Some local agrochemists alone consumed 5,000 excess tons of gasoline and diesel fuel during this period. Of 21 farms checked in Voronezh Oblast, 14 had consumed fuel in excess of their norms. During 1982 the kolkhozes Rassvet in Lebedyanskiy Rayon and imeni Michurin in Terbunskiy Rayon, the Dmitryashevskiy Sovkhoz and a number of other farms in Lipetsk Oblast exceeded their fuel consumption norms by 25 percent.

This excessive consumption of fuel and lubricating materials is explained to a large degree by unsatisfactory organization of the use of the machine-tractor pool, trucks, small motor vehicles and other items of transport equipment, especially during the winter months, and by the absence of the required grouping

of machines. For example, at the Leninskiy Put' Kolkhoz in Khokhol'skiy Rayon in Voronezh Oblast, seven K-700 and T-150K tractors engaged in transporting feed lay idle on the day that a check was carried out, despite the fact that their engines were in operating condition. During the course of a work shift, they made only 1-2 runs over a distance of 6-7 kilometers, carrying 1.5-2 tons instead of the normal 9-12 tons. It was by no means an accident that this farm, over the course of 2 years, exceeded its normal diesel fuel consumption for tractor-transport operations by 127 tons. Nor was this the only instance of this type of situation developing.

At a majority of the farms inspected, the tractors and motor vehicles operate with fuel equipment that has not been properly adjusted and the technical servicing of these vehicles is carried out in a low quality manner and on an untimely basis. At the kolkhozes 50 Let Oktyabrya in Verkhnekhav'skiy Rayon and Znamya Lenina and Karachanskiy in Gribovskiy Rayon in Voronezh Oblast, one out of every four tractors inspected was leaking diesel fuel or oil.

On many farms the production-financial plans reflect fuel consumption norms which are inflated compared to the actual norms approved by the planning organs. The use of such norms makes it easy to realize "false" savings in the use of fuel and lubricating materials. Thus at the Kolkhoz imeni XXII S'yezda KPSS in Belgorodskiy Rayon in Belgorod Oblast, as revealed during the course of an inspection, the production-financial plan for 1982 revealed a diesel fuel expenditure per standard hectare of 8.3 kg instead of 7.7. As a result, the farm realized a "savings" of 8 tons of fuel. Actually however, a recalculation revealed that an over-expenditure of 27 tons of fuel had occurred here.

On the whole, the annual reports for 1982 for kolkhozes and sovkhozes in Belgorod, Voronezh, Kursk and Lipetsk Oblasts reveal an excess consumption of diesel fuel and gasoline of approximately 1,000 tons. Actually however, a recalculation based upon the planned norms for the farms reveals an over-expenditure of more than 40,000 tons of fuel.

The liberties taken by the agricultural and planning organs in establishing the norms for fuel consumption in the various areas are quite well known. As early as July 1979, based upon the materials of a check carried out by the USSR People's Control Committee, the USSR Minsel'khoz Ministry of Agriculture issued an order requiring the introduction into operations, prior to 1 January 1980 and at all farms, of technically sound norms for the consumption of fuel for mechanized operations and the organization of constant control over the use of these norms. At the same time, USSR Gosplan acquainted the planning organs of the republics with the need for providing the various areas with differentiated fuel consumption norms in a timely manner and for observing them in a strict manner. However the next check revealed that no improvement had taken place in the status of affairs.

The importance of correct accounting procedures with regard to the thrifty consumption of material resources is well known. However the initial accounting for petroleum products is fraught with serious shortcomings. Inventories of fuel and lubricating materials are not being carried out in a timely manner at a majority of the farms and quite often the bookkeeping data departs from reality. This creates conditions for all types of abuses and the plundering of

fuel. Thus, during the course of removing surplus amounts from a petroleum storehouse of the Zadonskiy Rayon sel'khoztekhnika in Lipetsk Oblast, shortages of 67 tons of diesel fuel and 5 tons of gasoline were uncovered. At the Avrora Kolkhoz in Zadonskiy Rayon, an over-expenditure of 24 tons of gasoline and a surplus of 95 tons of diesel fuel were concealed from the accounting records.

Many incidents have been uncovered of gasoline and diesel fuel being written off with no consideration being given to the actual work carried out or to the expenditure norms. When motor vehicles are used, the readings are not always taken from the speedometer or fuel-remaining gauges and this often results in additions being made and in the illegal writing off of fuel and oils. At the Rossiya Kolkhoz in Usmanskiy Rayon in Lipetsk Oblast during the July to September period of last year, with the consent of the chairman, each driver was daily credited with 5-10 tons of sand and 10-15 tons of gravel for having transported grain and silage bulk. A driver by the name of Galusov at the motor vehicle base of the Lipetsk Plodoovoshchkhov Association, while on temporary duty from 16 October to 16 December last year in Gorkiy, Moscow and Tashkent, credited himself with 47,600 ton-kilometers and thus 1,666 liters of gasoline were written off unjustifiably and a driver by the name of Burlov, employing the same machinations, wrote off 2,303 liters of fuel. And all of this was carried out on the sly, as the saying goes.

The leaders of many farms, in violation of state and fund discipline and instructions handed down by the government on achieving more efficient use of fuel and lubricating materials, are expending them not as intended but rather they are selling them on the side to other organizations. Thus, during the first 6 months of last year the farms in Belgorod Oblast sold approximately 5,000 tons of motor vehicle gasoline and 3,000 tons of diesel fuel to industrial, transport, construction and trade organizations. And during the second half of the year, when the harvest period was at its peak, the oblast's agricultural organs addressed an appeal on seven occasions to the RSFSR Minsel'khoz requesting the allocation of additional quantities of petroleum products and especially gasoline. Owing to a lack of gasoline, the trucks which had been brought here for transporting the crops lay idle for in excess of 1,700 vehicle-days. This same situation developed in Kursk Oblast.

Considerable fuel losses are being tolerated as a result of the unsatisfactory condition of the petroleum storehouses and the outdoor refueling of vehicles. At the kolkhozes Rodina in Ertil'skiy Rayon and Leninskiy Put' in Khokhol'skiy Rayon in Voronezh Oblast, the equipment was refueled from pumps, the leakage from which and the measurement errors exceeded the norm by a factor of five. At the Kolkhoz imeni XXI S'yezda KPSS in Koro-chanskiy Rayon in Belgorod Oblast, 37 tons of gasoline were poured out onto the ground from a container in March of this year owing to the absence of proper controls. At the Okhochev'skiy Sovkhoz in Kursk Oblast, all 11 containers had leaks in them and at the Kursk meliorovodstroy PMK-1 Trust the fuel, despite the availability of pumps, was issued using pumps and the oil -- using pails and jugs.

The associations of Goskomsel'khoztekhnika, which are entrusted with the repair and technical servicing of the kolkhoz and sovkhoz petroleum storehouses, are not carrying out this work at the proper level in all areas. For example, the

Kursk and Belgorod oblast sel'khoztekhnika organizations, which have annual plans for carrying out capital repair work on 288 and 150 pumps respectively, have for all practical purposes not even commenced carrying out this work. The repair of equipment is being carried out on an untimely basis and in a low quality manner and the servicing is limited to merely painting the storage containers and correcting breakdowns and defects when requested to do so by the farms.

All of these and other shortcomings and derelictions in the use of fuel have become possible owing to the fact that the level of executive discipline and control over the implementation of measures for ensuring the efficient use of petroleum products is still not very high. Here is an example. The local agricultural organs, where checks had been carried out, were required by the RSFSR Minsel'khoz to report by 1 January of this year concerning the measures undertaken to restore order in the consumption of fuel. However, only the Voronezh Oblast Agricultural Administration issued a report in this regard; the remaining organizations have still not provided the information requested. As already mentioned, similar requirements handed down by the USSR Ministry of Agriculture also remain unfulfilled. No measures have been taken against those who violate the requirements. Gasoline losses are continuing and those responsible for bringing them to a halt have adopted a very passive attitude in this regard. Why is it then that the squanderers and plunderers are not being held accountable for their misdeeds?

Measures To Be Undertaken

Moscow SEL'SKAYA ZHIZN' in Russian 4 Aug 83 p 2

/Article: "Losses From the Oil River"/

/Text/ The Board of the USSR Minsel'khoz /Ministry of Agriculture/ has examined and approved the article entitled "Losses From the Oil River," published in the 28 June 1983 issue of SEL'SKAYA ZHIZN', and as reported by Deputy Minister N. Stolbushkin, recognizes that the shortcomings mentioned in the article in connection with the consumption, establishment of norms, storage and accounting for petroleum products, did in fact take place. Additional measures have been developed for correcting these shortcomings, with strict control being established over the carrying out of these measures.

The ministry has required the agricultural organs of union republics to undertake measures aimed at improving the planning for the consumption and use of petroleum products at kolkhozes, sovkhoses and other state agricultural enterprises and organizations, raising the personal responsibility of the leaders of agricultural organs and farms for their thrifty use, ensuring the establishment of proper order in the accounting for and setting of norms for petroleum products, terminating in a decisive manner all incidents of fuel and oil being consumed for purposes other than those originally intended and for dealing very strictly with those guilty of violating the established system.

The Editorial Board has also received a report from the minister of agriculture for the RSFSR, V. Nikonov. In his report, Nikonov states that the article criticizes quite fairly the shortcomings noted in the work of the agricultural

organs, kolkhozes and sovkhozes in Belgorod, Voronezh, Kursk and Lipetsk Oblasts in connection with the accounting for, storage and use of petroleum products.

The chiefs of the agricultural administrations of the Belgorod and Lipetsk oblast executive committees, the deputy chiefs of the agricultural administrations for the Kursk and Voronezh oblast executive committees V.V. Kondrat'yev, I.F. Narizhniy, I.A. Starodub and V.I. Gozhin and the chief bookkeepers for the mentioned administrations A.F. Shapovalov, B.T. Ivanov, R.Ye. Kirichenko and I.M. Davydov were dealt with in a very strict manner in connection with the non-fulfillment of the decrees and instructions handed down by the directive organs concerning realizing economies in the use of fuel and lubricating materials. Specific measures and schedules were defined for correcting the shortcomings.

Appropriate reports on the adoption of measures have also been sent in to the Editorial Board by the chairman of RSFSR Goskomsel'khoztekhnika Ye. Sadovnikov and by the deputy chairmen of oblast executive committees: Kursk -- F. Brovkin and Belgorod -- V. Bulygin.

Support For Local Measures

Moscow SEL'SKAYA ZHIZN' in Russian 4 Aug 83 p 2

/Article by K. Blum, chairman of the primary organization of the All-Russian Voluntary Society of Automobile Fanciers, Shushenskiy Rayon, Krasnoyarsk Kray: "Why At Public Expense?"

/Text The article entitled "Losses From the Oil River," which provided information on the great over-expenditures of petroleum products in a number of oblasts, was published in the newspaper SEL'SKAYA ZHIZN'. We are also observing such shortcomings. Large quantities of gasoline and oil are being consumed by the owners of private transport vehicles, although they must be refueled using gasoline acquired with market fund coupons.

There are more than 100 motorcycles and approximately 90 privately owned automobiles at our Sibir' Sovkhoz in Shushenskiy Rayon. As chairman of the primary organization of VDOAM /Vserossiyskoye dobrovol'noye obshchestvo avtomotolyubiteley; All-Russian Voluntary Society of Automobile Fanciers, I appealed to the sovkhoz management on several occasions requesting that privately owned transport vehicles be refueled on the basis of market fund coupons and for a market fund limit to be established subsequently for the sovkhoz. But we are still unable to solve this problem. The problem hinges upon the wages being paid to the refueling workers, who believe that 3 rubles for the issuing of 1 ton of fuel is very little. In addition, the workers at stores in our settlement do not desire to organize trade on the basis of coupons for gasoline, referring to the fact that we do not have a demand for them.

In light of this confusion, I turned to the chairman of the local soviet of people's deputies and to the chairman of the rayon VDOAM council and still we have not undertaken the required measures. It is obvious that everybody feels

that this problem must be solved at a higher level. SEL'SKAYA ZHIZN' has already reported that it will be solved for the country as a whole. But is it really necessary to wait for this to be done at a higher level? Many measures can be undertaken locally. And then gasoline will be consumed as originally intended.

Petroleum Product Losses Continue

Moscow SEL'SKAYA ZHIZN' in Russian 1 Dec 83 p 2

/Article by Yu. Yur'yev: "Once Again Concerning Fuel Losses"/

/Text/ Responses to the article entitled "Losses From the Oil River, printed on 28 June of this year, were published in one of the issues of the "People's Control" page.

A short time later, the Editorial Board also received a response to this newspaper article from Lipetsk Oblast, signed by the chairman of the executive committee of the oblast's soviet of people's deputies V. Donskikh. As early as 1981, or 2 years prior to the publication of the people's control materials in the newspaper, as reported by the oblast executive committee, "a complex of measures was developed aimed at achieving more efficient use of all types of fuel and energy resources. On the whole the oblast was ensured not only a normal, but for certain types of work, a thrifty regime for the use of petroleum products." Only in the last lines of the response from the Lipetsk Oblast Executive Committee was there brief mention of the fact that "punishments were handed down to certain officials and materially responsible workers for having tolerated over-expenditures of fuel and lubricating materials and for mismanagement."

The question springs to mind: why punish people if everything is in order in the oblast with regard to achieving fuel economies? And if punishments were handed down, could it be that they were not issued to all as indicated in the response? A new letter from Lipetsk, signed by the 1st deputy public procurator for the oblast A. Firosov, provides some assistance in solving this task.

We were informed by a senior legal advisor that the oblast's public procurator had carried out a check on the wasteful use of fuel and lubricating materials at kolkhozes and sovkhoses throughout the oblast, as mentioned in the article "Losses From the Oil River." And the facts were confirmed by this check. Moreover, new and quite fresh facts were uncovered. "For the wasteful expenditure of fuel" reported the public procurator, "the oblast's people's control committee severely reprimanded the manager of the Zadonskiy Rayon sel'khoztekhnika A. Arkhipov and in the interest of recovering part of the loss sustained, it imposed a fine of 250 rubles upon him. For the same reason, payments were withdrawn from the monthly salaries of the chairman of the Rossiya Kolkhoz in Usmanskiy Rayon V. Kireyev and also from the chief bookkeeper Nizhegorodovaya.

The public procurator for Pravoberezhnyy Rayon in Lipetsk Oblast, during the summer of this year, issued a warning to the acting deputy director of the

motor vehicle base of the oblast's Plodoovoshchkhov Association Z. Tat'yanin, concerning the serious consequences which would befall the leaders of the base if state gasoline was wasted wantonly in the future. In addition, the public procurator for Zadonskiy Rayon instituted criminal proceedings over the loss of 14,000 tons of fuel from the petroleum base of the Vladimirskiy Sovkhoz. The organs of procurator's supervision in Khlevenskiy and Terbunskiy Rayons uncovered some serious violations in this regard.

In order to obtain a clearer picture, we recently placed a phone call to the chairman of the Lipetsk Oblast People's Control Committee Ye. Vasil'chikov.

"Yes" he replied, "we are aware that the public procurator investigated some new facts concerning the squandering of fuel and punished the guilty parties."

Thus, petroleum product losses are continuing. What is the reaction to this of the oblast's people's control committee? The materials from the check carried out by the KNK /people's control committee/ were discussed even prior to the publication of the article "Losses From the Oil River." Since that time, not even random checks have been carried out on the status of affairs with regard to the use of fuel at kolkhozes, sovkhoses and other agricultural enterprises and organizations by the oblast's committee. The intention here is to carry out a second check next year. Will this not be too late? And how much fuel will be lost in the meantime? It is believed that control over the carrying out of decisions would be much more effective if patrols monitored the status of affairs on a regular basis in the interest of preventing the squandering of petroleum products.

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FORESTRY AND TIMBER

EXPLOITING TIMBER RESOURCES OF IRKUTSK AREA

Moscow PRAVDA in Russian 20 Nov 83 p 2

/Article by A. Sokolov, chairman of the Executive Committee of the Irkutsk Oblast Soviet of People's Deputies: "Taiga Treasures"/

/Text/ In the absence of forests it is difficult to imagine the live and daily routine of people or development of the national economy. The forest supplies in Irkutsk Oblast exceed 8 billion cubic meters. A great deal has been accomplished in the interest of raising the efficiency of exploitation of the forestry fund, introducing new enterprises and carrying out the technical reequipping of existing ones. The large Ust-Ilimsk Timber Industry Complex was built rather quickly immediately following the Bratsk complex. The Angara River region accounts for 10 percent of the all-union volume of timber procurements and the production of fiberboard panels. Fourteen percent of the cellulose is produced here, including all of the cord wood and almost one third of the crossties.

The overall supply of ripe and overripe timber is approaching 6 billion cubic meters. This is one tenth of the all-union supplies. Unfortunately, the procurements are being carried out mainly in inhabited areas. Each year, in the vicinity of the Trans-Siberian Trunkline and with the permission of the planning organs, the excess cuttings of coniferous strains are reaching two and one half million cubic meters. As a result, a reduction is taking place in the supplies of ripe wood and also in the exploitation periods for the raw material bases.

It is our opinion that the time is at hand for redistributing the timber-felling fund and commencing the development of the northern and northeastern regions and also the mountainous portion of the oblast's southern regions. It is here that one half of all of the timber supplies is concentrated. Special importance is being attached to developing wood procurements along the western edge of the BAM /Baykal-Amur Trunkline/, in the zone of the Bratsk Reservoir. The work volume can be increased by no less than threefold in the Ust-Kutskiy, Kazachinsko-Lenskiy, Nizhneilimskiy, Kirenskiy and other neighboring rayons. In accordance with a task assigned by Minlesbumprom /Ministry of the Lumber and Paper Industries/, Giprolestrans /State Institute for the Planning of Logging, Rafting and Woodworking Establishments and Lumber Transportation/ prepared a technical-economic justification for the construction here of new enterprises and the modernization of existing ones. But this work has still not been completed.

It is believed that the ministry will accelerate the organization of the Tayurskiy, Ust-Kut and Tirskiy timber industry farms. The planning organs must give some thought as to how best to enlist the aid of Glavbamtroy in the development of new tracts -- indeed it is completing its principal operations concerned with the installation of the trunkline.

The problem with regard to the efficient development of the oblast's forest resources is a very urgent one. The participation of numerous departments in developing the taiga treasures is causing serious harm to the work. The raw material bases are not being developed in the best possible manner owing to their general dispersal. Of the 32 million cubic meters of wood being obtained annually, approximately 10 million cubic meters are being obtained by the procurement specialists themselves. In the Angara River region there are more than 100 such enterprises of 43 union republic ministries and departments. It is unfortunate that they are not utilizing the rich tracts in a thrifty manner. Their shipment points are small and poorly mechanized. For the most part, only the trunks are being shipped. Everything else remaining perishes at the sites or at the lower timber yards. Labor productivity here is lower by a factor of four than that at the Irkutsklesprom Association.

The output production costs are excessively high. For example, at the Poltava and Zaporozhye timber industry farms these costs are on the order of 33 rubles per cubic meter and at the Krymskiy farm -- 52 rubles. At neighboring subunits of Irkutsklesprom, it is only approximately 10 rubles per cubic meter.

It is our opinion that the work of the procurement specialists should be regulated. It would seem to be only wise for them to belong to common associations in each union republic. The RSFSR Ministry of the Fuel Industry could provide guidance for representatives of the Russian Federation.

The placing in operation of the Bratsk complex, the first phase of the Ust-Ilimsk Timber Industry Complex and other enterprises has made it possible to raise noticeably the completeness of wood usage. The quality of the raw materials has improved substantially. Chemical and mechanical processing work has increased by a factor of 14. The oblast's enterprises are now themselves processing a good half of the wood being procured. The collective at the Kitoyles Association, for example, has introduced a technology which is almost waste-free: more than 90 percent of the raw material is processed and used.

However, there are still many unsolved problems. One of the branch's largest enterprises -- the Bratsk Timber Industry Complex -- is in serious trouble. Certainly, the management of the complex and the local party and soviet organs are guilty in this regard. Labor and technical discipline in the collective is low. But assistance is also required from Minlesbumprom. Its representatives have on more than one occasion announced the existence of an efficient program for developing the enterprise. As yet, this has only been a matter of words. For all practical purposes, the formation of the complex has not as yet been completed.

Another of the oblast's giants -- the Ust-Ilimsk Complex -- remains unfinished. Formerly there were 20,000 individuals performing shock work at its installations. But subsequently the leaders of USSR Minenergo /Ministry of

Power and Electrification transferred several thousand builders from Ust-Ilimsk to points beyond the oblast's borders. The departure of personnel is continuing. All of the schedules for completing the construction of the complex have been disrupted. Minenergo and Minlesbumprom remain at the half-way point.

Analysis reveals that timber procurements can be doubled in the Angara River region. It is only necessary to utilize the reserves more completely. One such reserve is that of introducing leading experience and scientific and engineering achievements. There are still 30,000 individuals performing manual labor in forestry throughout the oblast. Irkutsklesprom is not coping with its plan for delivering products to allied workers. Usually references are made to a shortage of railroad freight cars. Yes the railroad workers quite often cause work stoppages. But the timber procurement specialists themselves quite often disrupt the rhythm of the shipping operations. In the taiga the equipment can lie idle owing to breakdowns, a weak repair base, a lack of good roads for transporting the timber and also insufficient skills on the part of many machine operators. We consider it advisable to open up support points throughout the oblast for the tractor plants for the technical servicing and repair of equipment.

The task has been assigned of increasing the chemical processing of birch, asp and larch trees, which account for 40 percent of the forestry fund. At the present time, use is being made of only one eighth of these resources. At the same time, ripe coniferous trees are constantly being cut down and their number has been decreased by one fifth. A fine group of deficit products can be obtained from larch and birch trees, including parquet and finished plywood. One more furniture factory should be built, for example at Bratsk or Ust-Ilimsk. We possess good potential for producing good quality furniture for neighboring regions.

Despite the availability of raw materials, we are producing very few parquet tiles. This year the ministry planned to have Irkutsklesprom produce 15,000 square meters of single-layer sheet-parquet. This is a considerable volume.

The oblast is capable of supplying treeless regions with diverse products made from wood. At the present time we are exporting axe-handles, handles for shovels and rakes and so forth. It is considered normal for Irkutsklesprom to plan the production of wooden housing.

Large quantities of taiga resources are lost owing to technological imperfections. Each year approximately 3 million cubic meters of tree felling waste products go unused. Roughly 120,000 cubic meters of procured wood, twigs, branches and fragments of trunks remain in the taiga. And how many logs and particularly heavy larch trunks sink during rafting operations. Last year, Irkutsklesprom alone lost approximately 80,000 cubic meters of timber during rafting operations.

One urgent problem is that of utilization of secondary resources. Their overall volume exceeds seven million cubic meters annually, with use being made of only one fifth of this amount. In Bratsk and Ust-Ilimsk, owing to the absence of processing capabilities for sawdust and other small items, more

than one half million cubic meters of waste products are being burned annually. And indeed they could be used for producing cellulose, cardboard, panels, alcohol and nutrient yeasts. In addition to other advantages, this would make it possible to realize a savings in the use of thousands of hectares of taiga land. Unfortunately, the scientists are devoting very little attention to the mentioned problems. For example, forestry operations occupy only three percent of the subject plan for scientific studies at the Irkutsk Polytechnic Institute.

Everyone recognizes the importance of organizing complete processing of the wood from the roots to the tops and also of the needles. But the recognition alone of an indisputable truth is not enough. Progressive technologies, machines and equipment are also required. The time has come for organizing in the Angara River region the processing of a portion of the cellulose and cardboard produced by us and for building plants for the production of viscose fiber, fabrics and corrugated packaging materials.

One of the most vital tasks is that of forest preservation and restoration. The scientists estimate that the wood from each hectare can furnish an average of 500 rubles and that the environment-forming and resource-protective capabilities of the "green friend" furnish 6,000 rubles. In recent years the areas of green zones around cities and along railroads, rivers and highways have increased by a factor of 1.5. And still this represents a very small amount.

The pearl of the Siberian taiga -- the cedar trees -- warrant special attention. In the Angara River region alone, they occupy an area of 6.6 million hectares. There is an imperative need for protecting all of the cedar forests, terminating the procurement of wood from them and for limiting the work in these forests to carrying out sanitary fellings.

Considerable concern has been aroused over the Baykal Pulp and Paper Combine. It long ago entered the ranks of backward enterprises. It does not furnish a great amount of output (unprofitable for the most part) and it is harmful to the environment. We consider it both wise and advantageous to change the profile of the combine by organizing here, for example, the production of furniture. This will not lower the oblast's production of cellulose: the amount obtained at the enterprise will be repaid with interest with the complete development of the capabilities at Bratsk and Ust-Ilimsk.

The enterprises of the chief forestry branch in the Angara River region require skilled personnel. Beyond any doubt, it would also be useful to organize a scientific center for working out the problems of the forestry complex at the East Siberian Branch of the USSR Academy of Sciences. These measures will serve to promote the more efficient use of all of the treasures of the Siberian taiga.

WATER RESOURCES

WATER RESOURCE PROBLEMS IN THE UKRAINE DISCUSSED

Planting Watershed Protective Zones Delayed

Kiev SIL'S'KI VISTI in Ukrainian 28 Sep 83 p 2

[Article, published under the heading "Be a Good Manager of the Land," by I. Bokoch, inspector, UkSSR State Committee for the Protection of Nature; O. Vedmedenko, secretary in charge of the bulletin "Our Nature," of the Ukrainian Nature Preservation Society; and A. Zhuravs'kyy, volunteer correspondent for SIL'S'KI VISTI: "Are Riverbanks Greening Everywhere?"]

[Text] More than 22,000 rivers flow in our republic. An imposing figure, it would seem. Only 117 of these rivers are more than 100 kilometers in length, approximately 2,500 are more than 10 kilometers long, while the rest are even smaller. Our republic is considerably below the national average in per capita water resources. Therefore careful management utilization and protection of our rivers take on particular significance.

Six years ago the UkSSR Council of Ministers ratified a statute on water conservation zones for this republic's small rivers, lakes and reservoirs. It specifies the procedure of implementing water protection and conservation measures, and in particular specifies the creation of strips along banks and shores in which all plowed acreage must be turned into meadow or forest.

Zhitomir Oblast was prompt in issuing appropriate decisions and resolutions. But how are water resource protection measures being implemented in actual fact?

Our tour of inspection revealed that this work is just commencing although, as they say, there has been plenty of time to "get things moving." Most rayons have secured plans and cost estimate documentation on establishing watershed protective zones, riverbank and lake-reservoir green strips, prepared by branches of the Ukrzemproyekt and Ukrdeprovodkhoz institutes, and this was about as far as things went. Administrators and management personnel have in many cases failed to allocate the requisite acreage. Therefore it is not surprising that last year plan targets pertaining to regrassing bank and shore strips were accomplished only in Yemilchinskiy, Volodarsko-Volynskiy, Berdichevskiy, and Popelnyanskiy rayons. Last year's target called for regrassing 2,443 hectares of bank and shore strips in the oblast as a whole, while only somewhat more than half of this acreage was actually seeded.

Specialists on a great many farms explain that this is due to the fact that they were not promptly supplied with plan documentation. There is some truth to this. But this documentation was prepared and turned over to the farms in the spring of this year, although with a delay. Many places, however, you will not see riverbank and shore strips actually designated. In part this is due to fear of cutting crop acreage. But if the managers of certain farms were really more concerned over the fate of the rivers, they would show the rivers their gratitude in a more generous manner than those, for example, flax-planted banks of the Sluch in Novograd-Volynskiy Rayon (what kind of yields can be grown when nature herself has from time immemorial commanded meadows to grow there?). They can make up for the crop lost from acreage designated for a riverbank watershed protection strip by boosting crop yields on other available crop acreage. Of course that will require work.

The inspection tour participants saw the boundaries of the bank and shore strips only on paper. And yet the reports for last year state that they extend 4,203 kilometers. To judge from report figures, in Novograd-Volynskiy Rayon the establishment of bank and shore strips is also completed. And yet the kolkhozes imeni Lenin, imeni Kirov, and a number of other farms have not yet begun this task. One was hard put to find warning and watershed protection signs, placement of which on riverbanks is specified by the methods instructions on the procedure of implementing watershed protection measures (we finally saw such signs on the Kolkhoz imeni Shevchenko), and the riverbank strips are marked almost nowhere by plowed furrows and stakes, as they should be.

In Chudkovskiy Rayon the land use surveyor service (chief land use surveying engineer I. Mudrovs'kyy) has not even examined available planning documentation. No field group of activists has yet been put together to actually set up the riverbank strips. Specialists at the rayon agricultural administration were unable to answer the question of what has been done on the banks of the Teterev. And yet the fate of this river is beginning to be of concern. There have been more and more instances of plowing the banks right up to the waterline. Large acreages within the riverbank strips along the Teterev, Svinolushka, and Dubovik rivers have been plowed up on the Ukrayina and Za Komunizm kolkhozes, on the Zdobutok Zhovtnya, Pam'yat' Lenina and other sovkhoses. Along the banks of the Teterev refuse dumps are piling up at many locations right by the water.

Last year several inspection tours were made in the rayon. But things have not improved. The land use surveyor service and other organizations whose job it is to care for the protection of our rivers, lakes and reservoirs have to date failed to respond to critical articles appearing in the rayon newspaper.

The status of the Teterev is no better in Zhitomirskiy Rayon. The Kolkhoz imeni Shchors, for example, plows its banks practically to the waterline. The riverbanks are also being mercilessly laid bare in Korostyshevskiy Rayon, especially on the Kolkhoz imeni Kirov and the Ukrayina Kolkhoz.

This is also causing the picturesque Sluch to become shallower in Dzerzhinskiy and Baranovskiy rayons.

Riverbank afforestation is proceeding extremely slowly. Even in Novograd-Volynskiy Rayon, where certain experience has been amassed in conservation work,

not a single hectare (of the target of 57 hectares) was planted this spring in strips along rivers, lakes and reservoirs. Plans also called for afforestation of more than 48 hectares of bank and shore in Chudnovskiy Rayon, but the good intentions remained on paper. And how can riverbanks be planted if almost all the farms in the oblast except for Baranovskiy and Berdichevskiy rayons have failed to turn over to the forestry establishments the requisite afforestation acreage?

This year the largest riverbank acreages to be afforested are in Ovrutskiy, Radomyshl'skiy, and Zhitomir'skiy rayons (from 60 to 120 hectares). Even the working documentation on establishing watershed forest strips has been prepared. All that remains is to do the job, but nobody has budged.

On the territory of the Olevskaya forest section of the Zhitomir Peat Association it is not so much that they are being slow about planting trees along the banks of the Ubort, but that they are cutting trees and brush along the banks to fence in private farm plots. And they are getting away with all this. In the rayon administrative center, not far from the Ubort, they are building a stadium. They did not bother to separate the river from the construction site with a protective strip of vegetation. Now the riverbank is sloughing off into the water before one's very eyes. It is also a pity that to date the Zhitomir branch of the Ukrzemproyekt Institute has failed to prepare working documentation for the establishment of watershed protective strips for Andrushevskiy, Pepelnianskiy, Ruzhinskiy, and other rayons.

It is surprising that in Zhitomir Oblast, where in general nature conservation work is being conducted at an adequate level, there occur such instances of negligent attitude toward rivers. One cannot help but draw the conclusion that the oblast executive committee, its agricultural administration and other services should more diligently verify execution of their decisions. In addition, not only the land use surveyor service and the oblast nature conservation inspectorates should show concern for small rivers, but also, and particularly, water conservation agencies of the UkSSR Ministry of Land Reclamation and Water Resources. Only with common concern for this republic's rivers will they preserve their flow and purity, generously benefiting man.

Kiev Water Resources Management Conference

Kiev SIL'S'KI VISTI in Ukrainian 1 Nov 83 p 2

[Article (RATAU): "A Proper Management Attitude Toward Water"]

[Text] The Present state of water resources management and the degree to which the various branches and sectors of the economy are provided with water resources was examined at a republic scientific and technical conference entitled "Current Problems of Efficient Utilization and Conservation of Water Resources in the Ukrainian SSR," which has just ended in Kiev.

Reports by UkSSR Minister of Land Reclamation and Water Resources M. A. Harkusha, Doctor of Geological-Mineralogical Sciences A. L. Velikanov, deputy director of the USSR Academy of Sciences Institute of Water Problems, UkSSR

Academy of Sciences Academician A. T. Pylypenko, director of the Institute of Colloid Chemistry and Chemistry of Water, Corresponding Member of the UkSSR Academy of Sciences V. D. Romanenko, director of the UkSSR Academy of Sciences Institute of Hydrobiology, and other addresses noted that a considerable amount of work is being done in this republic toward improving the level of urban and rural water supply, toward stabilizing the water regime of our rivers, and toward rational and economical utilization of fresh water. This is being accomplished both by building new reservoirs and canals and by incorporating scientific and technological advances into production.

It was stated in particular that reservoirs built on the Dnieper presently provide the capability to accumulate and utilize 24 cubic kilometers of water for the needs of our economy, while presently operating canal systems: the Dnieper-Donbass, Kakhovka, Northern Crimean, Dnieper-Krivoy Rog, the Severskiy Donets-Donbass, and others -- provide the capability to redistribute and convey an additional 15 cubic kilometers of fresh water to industrial and arid agricultural areas of this republic. Preliminary work has begun on construction of the Dneprovsko-Busskiy hydroengineering system which, when it goes into operation, will provide the capability, without detriment to the Dnieper, to take an additional 8 cubic kilometers of water from the river and keep the Dneprovsko-Busskiy liman from saltwater invasion.

There was discussion at the conference about the need to improve the quality of designing water resource management facilities and control systems, to improve the process of setting standard quotas for water consumption in the various branches and sectors of the economy, operation of water facilities, and implementation of measures to achieve economical utilization of water and increase the contribution of scientific organizations toward resolving these problems.

UkSSR Academy of Sciences Academician K. M. Sytnyk, vice-president of the UkSSR Academy of Sciences, took part in the conference proceedings.

Ministry Response to Article on Delays

Kiev SIL'S'KI VISTI in Ukrainian 12 Nov 83 p 2

[Response to SIL'S'KI VISTI article by UkSSR Ministry of the Forest Industry and the UkSSR Ministry of Land Reclamation and Water Resources: "'Are the River-banks Greening Everywhere?'"]

[Text] A report by an inspection team appeared under the above title in SIL'S'KI VISTI (No 222), discussing shortcomings in afforestation of the banks of small rivers, lakes and reservoirs in Zhitomir Oblast.

The editors were informed by Deputy Minister of the Forestry Industry V. Brezhnev that the ministry has carefully looked into the newspaper report. Plans call for establishing 2,600 hectares of watershed protection forest strips on kolkhoz and sovkhoz lands in Zhitomir Oblast by 1990. The production capacity of forestry enterprises provides the capability to accomplish this project. The land users, however, are failing promptly to turn over the designated acreage for afforestation. For this reason this year's target

pertaining to establishment of watershed protective strips along small rivers, lakes and reservoirs was not accomplished. The ministry will exercise closer oversight to ensure prompt and timely afforestation of the banks of small rivers in Zhitomir Oblast.

We also received a reply from Deputy Minister of Land Reclamation and Water Resources V. Cherednychenko. He has informed the editors that the Upper Dnieper Basin Administration and the Zhitomir Oblvodkhoz have established continuous oversight to ensure implementation of watershed conservation measures by all enterprises and farms, including the establishment of watershed protective zones along small rivers. Specific proposals pertaining to accelerating the pace of afforestation of small rivers, lakes and reservoirs are presently being drawn up.

Equipment Ruined Due to Unprotected Storage

Kiev SIL'S'KI VISTI in Ukrainian 23 Nov 83 p 2

[Article, published under the heading "In the UkSSR People's Control Committee": "Protect State Property"]

[Text] An inspection performed by the UkSSR People's Control Committee brought to light the following: serious deficiencies are occurring in the organizations of the republic Ministry of Land Reclamation and Water Resources pertaining to safeguarding of uninstalled equipment. In the last two and a half years, for example, the quantity of uninstalled equipment has increased by 12 percent.

There has been a particularly substantial accumulation of equipment on construction of the Dnieper-Donbass Canal. Supplies and equipment storage buildings are in a neglected state, while open-air sites are not adequately suited for storing equipment -- it stands on open ground, unprotected from the elements. No efforts are being made to cover or protect it. As a consequence 14,000 rubles worth of supplies and equipment has been ruined, separated from essential components, and brought to a state of uselessness.

Things are no better in the Donbassvodstroy and Kievvodstroy trusts. In the Donbassvodstroy Trust in particular, in the last year and a half the quantity of equipment which is lying around idle has doubled. Control cabinets, panels, and frames have been lying in piles on open-air sites for a period of several years, and a good deal of this equipment has deteriorated to a state of uselessness. More than 20,000 rubles worth of electrical equipment is piled among building materials and rubbish at organizations of the Kievvodstroy Trust.

This happened because the ministry and its main administration for supply fail to impose adequate demandingness on subordinate organizations for failure to meet equipment installation targets and do a poor job of exercising oversight function to reduce above-plan surpluses and to determine excessive supplies on hand.

The committee has drawn the attention of the UkSSR Ministry of Land Reclamation and Water Management to unsatisfactory observance of requirements to reduce stocks of uninstalled equipment and to improve storage and protection

of said equipment. Due note was taken of a statement by Deputy Minister V. M. Tkach that the inspection materials will be examined at a meeting of the board and that additional measures will be taken to correct deficiencies.

M. T. Ukhryanchenko, chief of the ministry's main administration for supply, was issued a reprimand, and severe reprimands were issued to A. P. Predko, official in charge of construction of the Dnieper-Donbass Canal, Ye. A. Horbatyuk and V. I. Slyva, managers of the Kievvodstroy and Donbassvodstroy trusts. Deductions have been made from the pay of comrades Predko and Horbatyuk as partial compensation for the financial loss incurred by the state from the ruining of uninstalled equipment. It was taken into consideration that Comrade Slyva has been declared financially liable by the ministry.

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